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1973

Water Resources Data for Washington

Part 2. Water Quality Records

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AT URBANA-CHAMPAIGN

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Prepared in cooperation with the State of Washington
and with other agencies

CALENDAR FOR WATER YEAR 1973

1972

OCTOBER

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1973

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1973

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DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Prepared in cooperation with the State of Washington
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Washington State Department of Ecology
Washington State Department of Fisheries
Washington State Department of Game
City of Tacoma, Department of Public Utilities
Confederated Tribes of the Colville Reservation
Yakima Tribal Council
U.S. Environmental Protection Agency

Water resources records, 1973 for Washington are in the following reports of the U.S. Geological Survey:

1. Water Resources Data for Washington
   Part 1. Surface Water Records

2. Water Resources Data for Washington
   Part 2. Water Quality Records

Copies of this report may be obtained from
District Chief, Water Resources Division
U.S. Geological Survey
Room 300, 1305 Tacoma Avenue South
Tacoma, Washington 98402

1974

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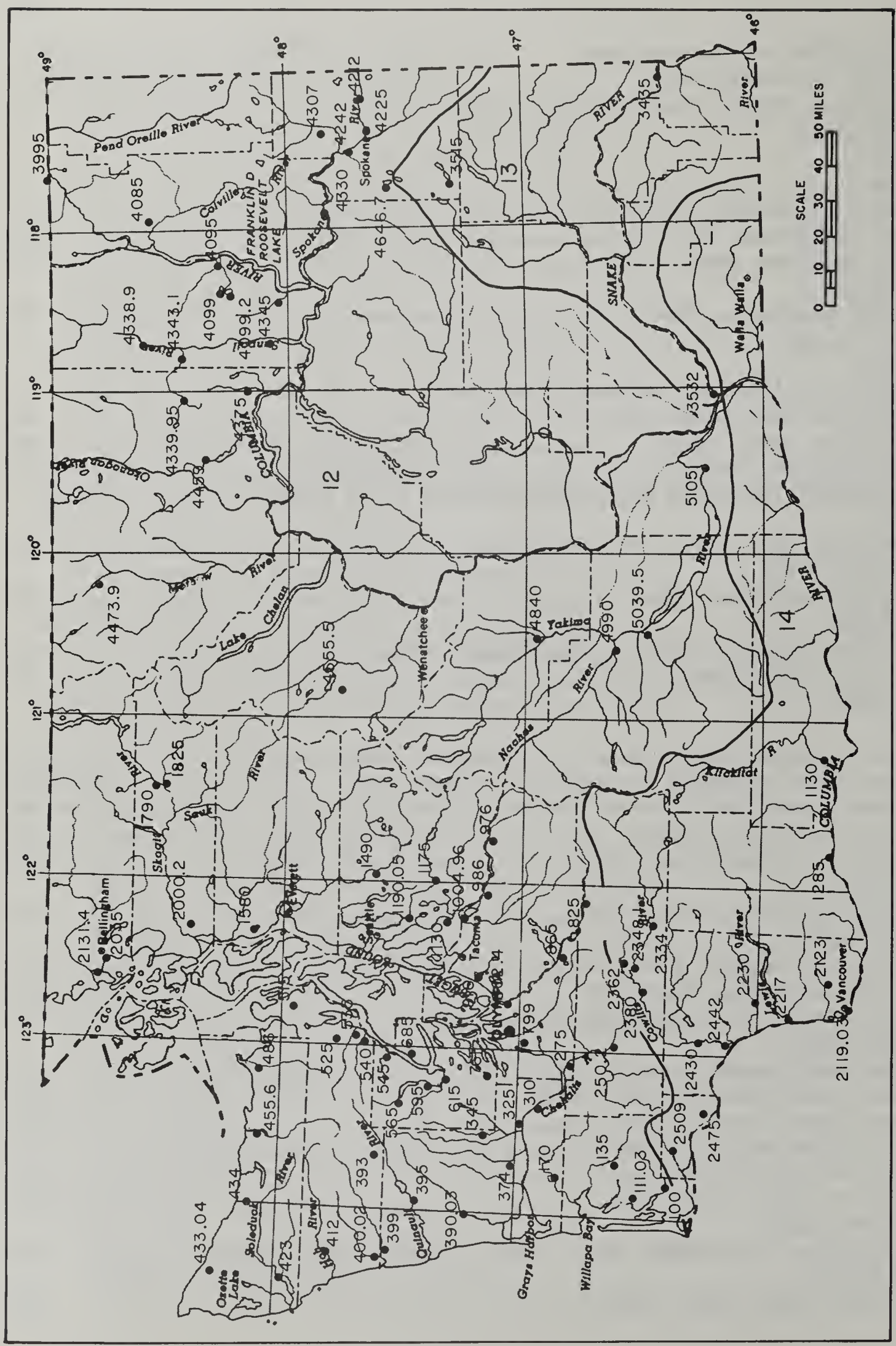

FIGURE 1. Map of Washington showing locations of continuous record sampling stations operated by the U.S. Geological Survey in cooperation with other agencies. Numbers shown are abbreviated versions of complete station number used in text.

WATER RESOURCES DATA FOR WASHINGTON, 1973
Part 2. Water Quality Records

INTRODUCTION

Water resources data for the 1973 water year for Washington include records of data for the chemical and physical characteristics of surface water. Data on the quality of surface water (chemical, temperature, and sediment) were collected from designated sampling sites at predetermined intervals such as once daily, weekly, monthly or less frequently. Records are given for 363 sampling stations of which 181 are continuous record stations and 182 are partial-record stations. Locations of the continuous-record sampling stations are shown in figure 1. A few pertinent stations (not included above) in bordering States are also included. The records were collected by the Water Resources Division of the U.S. Geological Survey under the direction of L. B. Laird, district chief. These data represent that portion of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Washington.

The Geological Survey has published records of chemical quality, water temperatures, and sediment since 1941 in an annual series of water-supply papers entitled, "Quality of Surface Waters of the United States." Beginning with the 1964 water year, water-quality records have been released by the Geological Survey in annual reports on a State-boundary basis. These reports are for limited distribution and are designed primarily for rapid release of data shortly after the end of the water year. These records will be published later in Geological Survey water-supply papers.

COOPERATION

This report was prepared by the U.S. Geological Survey under cooperative agreement with the following organizations:

Washington State Department of Ecology, J. A. Biggs, director.

Washington State Department of Fisheries, T. C. Tollefson, director.

Washington State Department of Game, C. N. Crouse, director.

City of Tacoma, Department of Public Utilities, A. J. Benedetti, director.

Confederated Tribes of the Colville Reservation, Mel Tonasket, chairman, Colville Business Council.

Yakima Tribal Council, R. B. Jim, chairman.

Assistance in the form of funds or services was given by the U.S. Environmental Protection Agency in collecting records for 11 water quality stations.

Additional data or aid were furnished by the Washington State Department of Ecology and Public Utilities District No. 1 of Chelan County.

DEFINITION OF TERMS

Terms related to water-quality and hydrologic data, as used in this report are defined below. See also table for converting English units to International System of Units (SI) on p. 16.

Acre-foot (AC-FT, ac-ft) is a quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons.

Bed material is the shifting portion of fragmented alluvial material of which the streambed is composed.

Biochemical oxygen demand (BOD) is the amount of oxygen required by bacteria while stablizing decomposable organic matter under aerobic conditions.

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, or about 646,000 gallons, and represents a runoff of approximately 0.0372 inches from 1 square mile.

Chemical oxygen demand (COD) indicates the quantity of oxidizable compounds in water and varies with water composition(s), temperature, period of contact, and other factors.

Coliform organisms are a group of bacteria used as an indicator of the sanitary quality of the water. The number of coliform colonies per 100 milliliters is determined by the immediate or delayed incubation membrane filter method.

Cubic foot per second (cfs,CFS) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute.

Discharge is the volume of water (or more broadly, total fluids), that passes a given point within a given period of time.

Mean discharge is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Drainage area of a stream at a specified location is that area, measured in horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the river above the specified point.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or body of impounded surface water together with all tributary surface stream and bodies of impounded surface water.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height or discharge are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is computed.

Hardness of water is a physical-chemical characteristic attributable to the presence of alkaline earths (principally

calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per liter (µg/l,UG/L) is a unit expressing the concentration of chemical constituents in solution as weight (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (mg/l,MG/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the weight of solute per unit volume of water. Milligrams or micrograms per liter may be converted to milliequivalents (one thousandth of a gram-equivalent weight of a constituent) per liter by multiplying by the factors in table 1, page 5. Concentration of suspended sediment also is expressed in mg/l, and is based on the weight of sediment per liter of water-sediment mixture. Sediment concentrations may be converted to parts per million by using the factors in table 2, p. 5.

Partial-record station is a particular site where limited streamflow or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined either by sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling) (Guy, 1969).

Particle-size classification, used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay.....	0.00024 - 0.004	Sedimentation.
Silt.....	.004 - .062	Sedimentation.
Sand.....	.062 - 2.0	Sedimentation or sieve.
Gravel.....	2.0 - 64.0	Sieve.

Table 1.--Factors for conversion of chemical constituents in milligrams or micrograms per liter to milliequivalents per liter

Ion	Multiply by	Ion	Multiply by
Aluminum (Al^{+3})*...	0.11119	Iodide (I^{-1}).....	0.00788
Ammonia as NH_4^{+1}...	.05544	Iron (Fe^{+3})*.....	.05372
Barium (Ba^{+2}).....	.01456	Lead (Pb^{+2})*.....	.00965
Bicarbonate (HCO_3^{-1})	.01639	Lithium (Li^{+1})*...	.14411
Bromide (Br^{-1}).....	.01251	Magnesium (Mg^{+2})..	.03226
Calcium (Ca^{+2}).....	.04990	Manganese (Mn^{+2})*.	.03640
Carbonate (CO_3^{-2})..	.03333	Nickel (Ni^{+2})*....	.03406
Chloride (Cl^{-1})....	.02821	Nitrate (NO_3^{-1})...	.01613
Chromium (Cr^{+6})*...	.11539	Nitrite (NO_2^{-1})...	.02174
Cobalt (Co^{+2})*.....	.03394	Phosphate (PO_4^{-3}).	.03159
Copper (Cu^{+2})*.....	.03148	Potassium (K^{+2})...	.02557
Cyanide (CN^{-1}).....	.03844	Sodium (Na^{+1}).....	.04350
Fluoride (F^{-1}).....	.05264	Strontium (Sr^{+2})*.	.02283
Hydrogen (H^{+1}).....	.99209	Sulfate (SO_4^{-2})...	.02082
Hydroxide (OH^{-1})...	.05880	Zinc (Zn^{+2})*.....	.03060

*Constituent reported in micrograms per liter; multiply by factor and divide results by 1,000.

Table 2.--Factors for conversion of sediment concentration in milligrams per liter to parts per million*
(All values calculated to three significant figures)

Range of concentration in 1000 mg/l	Divide by	Range of concentration in 1000 mg/l	Divide by	Range of concentration in 1000 mg/l	Divide by	Range of concentration in 1000 mg/l	Divide by
0 - 8	1.00	201-217	1.13	411-424	1.26	619-634	1.39
8.05- 24	1.01	218-232	1.14	427-440	1.27	636-650	1.40
24.2 - 40	1.02	234-248	1.15	443-457	1.28	652-666	1.41
40.5 - 56	1.03	250-264	1.16	460-473	1.29	668-682	1.42
56.5 - 72	1.04	266-280	1.17	476-489	1.30	684-698	1.43
72.5 - 88	1.05	282-297	1.18	492-506	1.31	700-715	1.44
88.5 -104	1.06	299-313	1.19	508-522	1.32	717-730	1.45
105 -120	1.07	315-329	1.20	524-538	1.33	732-747	1.46
121 -136	1.08	331-345	1.21	540-554	1.34	749-762	1.47
137 -152	1.09	347-361	1.22	556-570	1.35	765-780	1.48
153 -169	1.10	363-378	1.23	572-585	1.36	782-796	1.49
170- -185	1.11	380-393	1.24	587-602	1.37	798-810	1.50
186 -200	1.12	395-409	1.25	604-617	1.38		

*Based on water density of 1.000 g/ml and a specific gravity of sediment of 2.65.

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis (Guy, 1969).

Plankton is the floating (or weakly swimming) animal or plant life in a body of water consisting chiefly of minute plants (as diatoms and blue-green algae) and of minute animals (as protozoan, entomostracans, and various larvae).

Sediment is solid material that originates mostly from disintegrated rocks and is transformed by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment discharge is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight, or by volume, that is discharged in a given time. It is computed by multiplying discharge times mg/l times 0.0027.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/l).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. This ratio should be known especially for water used for irrigating farmland.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current and is expressed in micromhos per centimeter at 25°C. Because the specific conductance is related to the number and specific chemical types of ions in solution, it can be used for approximating the dissolved-solids content in the water. Commonly, the amount of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream or from well to well, and it may even vary in the same source with changes in the composition of the water.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff." Streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Thermograph is a thermometer that continuously and automatically records, on a chart, the water temperature of a stream. "Temperature recorder" is the term used to indicate the location of the thermograph or a digital mechanism that automatically records water temperature on paper tape.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the water year.

Tons per acre-foot indicates the dry weight of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour day.

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of

individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir. See also table for converting English Units to International System (SI) Units on p. 16.

SPECIAL NETWORKS AND PROGRAMS

Some of the stations for which data are published in this report are included in special networks and programs. These stations are identified by their title, set in parentheses, under the station name.

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

International Hydrological Decade (IHD) River Stations provide a general index of runoff and materials in the water balance (discharge of water, and dissolved and transported solids) of the world. In the United States, IHD Stations provide indices of runoff and the general distribution of water in the principal river basins of the conterminous United States and Alaska.

Irrigation network stations are water-quality stations located at or near certain streamflow gaging stations west of the main stem of the Mississippi River. Data collected at these stations are used to evaluate the chemical quality of surface waters used for irrigation and the changes resulting from the drainage of irrigated lands. Prior to water year 1966, the data for these stations were published in the annual water-supply paper series, "Quality of Surface Waters for Irrigation, Western States."

Pesticide program is a network of regularly sampled water-quality stations where additonal monthly samples are collected to determine the concentration and distribution of pesticides in streams whose waters are used for irrigation or in streams in areas where potential contamination could result from the application of the commonly used insecticides and herbicides.

DOWNSTREAM ORDER AND STATION NUMBER

Stations are listed in downstream direction along the main stream, and stations on tributaries are listed between stations on the main stream in the order in which those tributaries enter the main stream. Stations on tributaries entering above all mainstream stations are listed before the first mainstream station. Stations on tributaries to tributaries are listed in a similar manner. In the list of water-quality stations in the front of this report the rank of tributaries is indicated by indention, each indention representing one rank.

As an added means of identification, each water-quality station, gaging station, and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record and continuous-record stations; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Water-quality stations located at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station. Gaps are left in the numbers to allow for new stations that may be established; hence the numbers are not consecutive. The complete 8-digit number for each station, such as 12149000 which appears just to the left of the station name includes the 2-digit part number "12" plus the 6-digit downstream order number "149000." In this report, the records are listed in downstream order by parts. The part number refers to an area whose boundaries coincide with certain natural drainage lines. Records in this report are in Part 12 (Pacific slope basins in Washington and upper Columbia River basin), Part 13 (Snake River basin), and Part 14 (Pacific slope basins in Oregon and lower Columbia River basin). All records for a drainage basin encompassing more than one State could be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

COLLECTION AND EXAMINATION OF DATA

Water samples for analyses usually are collected at or near gaging stations. The discharge records at these stations are used in conjunction with the computations of the chemical constituents and sediment loads. Discharge records for

streams in Washington have been released in the report, "Water Resources Data for Washington, 1973, Part 1. Surface Water Records."

The data in this report include a description of the sampling station and tabulations of the samples analyzed. The description of the sampling station gives the location, drainage area, periods of record for the various water-quality data, extremes of the pertinent data, and general remarks, in a format similar to that used for streamflow gaging stations.

Water-quality information is presented for chemical quality, biological, microbiological, water temperature, and fluvial sediment. Chemical quality includes concentrations of individual dissolved constituents and certain properties or characteristics such as hardness, sodium adsorption ratio, specific conductance, and pH. The biological information includes qualitative and quantitative analyses of plankton, bottom organisms, and particulate inorganic and amorphous matter present. Microbiological information includes quantitative identification of certain bacteriological indicator organisms. Water-temperature data represent once-daily observations except for stations where a continuous temperature recorder furnishes information from which daily minimums and maximums are obtained. Fluvial-sediment information is given for suspended-sediment discharges and concentrations and for particle-size distribution of suspended sediment and bed material.

Prior to the 1968 water year, data for chemical constituents and concentrations of suspended sediment were reported in parts per million (ppm) and water temperatures were reported in degrees Fahrenheit (°F). In October 1967, the U.S. Geological Survey began reporting data for chemical constituents and concentrations of suspended sediment in milligrams per liter (mg/l) and water temperatures in degrees Celsius (centigrade, °C). In waters with a density of 1.000 g/ml (grams per milliliter), parts per million and milligrams per liter can be considered equal. In waters with a density greater than 1.000 g/ml, values in parts per million should be multiplied by the density to convert to milligrams per liter. Temperatures reported in degrees Celsius may be converted to degrees Fahrenheit by using the table on page 11.

In October 1968, the Geological Survey began reporting many of the chemical constituents as well as the minor

elements in micrograms per liter instead of milligrams per liter. (See "Definition of Terms," p. 5 and table for converting English Units to SI Units, p. 16.

Table 3.--Degrees Celsius (°C) to degrees Fahrenheit (°F)*
(Temperature reported to nearest 0.5°C)

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
0.0	32	10.0	50	20.0	68	30.0	86	40.0	104
.5	33	10.5	51	20.5	69	30.5	87	40.5	105
1.0	34	11.0	52	21.0	70	31.0	88	41.0	106
1.5	35	11.5	53	21.5	71	31.5	89	41.5	107
2.0	36	12.0	54	22.0	72	32.0	90	42.0	108
2.5	36	12.5	54	22.5	72	32.5	90	42.5	108
3.0	37	13.0	55	23.0	73	33.0	91	43.0	109
3.5	38	13.5	56	23.5	74	33.5	92	43.5	110
4.0	39	14.0	57	24.0	75	34.0	93	44.0	111
4.5	40	14.5	58	24.5	76	34.5	94	44.5	112
5.0	41	15.0	59	25.0	77	35.0	95	45.0	113
5.5	42	15.5	60	25.5	78	35.5	96	45.5	114
6.0	43	16.0	61	26.0	79	36.0	97	46.0	115
6.5	44	16.5	62	26.5	80	36.5	98	46.5	116
7.0	45	17.0	63	27.0	81	37.0	99	47.0	117
7.5	45	17.5	63	27.5	81	37.5	99	47.5	117
8.0	46	18.0	64	28.0	82	38.0	100	48.0	118
8.5	47	18.5	65	28.5	83	38.5	101	48.5	119
9.0	48	19.0	66	29.0	84	39.0	102	49.0	120
9.5	49	19.5	67	29.5	85	39.5	103	49.5	121

*C 5/9 (°F - 32) or °F 9/5 (°C) 32.

Solutes

The methods of collecting and analyzing water samples for determining the kinds and concentrations of solutes are described by Brown, Skougstad, and Fishman (1970). One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge depending on the source of material and the turbulence and the mixing of the stream. Some must be sampled at several verticals across the channel to determine accurately the solute load.

The daily chemical quality data in this report generally represent equal-volume composites for 2- to 30-day periods;

the composite periods are selected on the basis of specific conductance of the daily samples and fluctuation of water discharge.

Temperature

Water temperatures are measured at most of the water-quality stations. For daily stations, the water temperatures are taken at about the same time each day when sample is collected. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where continuously recording thermographs are present, the records consist of maximum and minimum temperatures for each day and the monthly averages.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross-section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the sub-divided day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the sub-divided day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of the quantities of suspended sediment, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included.

WATER-SUPPLY PAPERS

The annual series of water-supply papers that give information on quality of surface waters in Washington are shown in the following table.

Table 4.--Water-supply paper numbers and parts, water years 1947-71

Year	Parts 9-14	Year	Parts 9-14	Year	Parts 12-16
1947	1102	1956	1453	1964	A1959
1948	1133	1957	1523	1965	1966
1949	1163	1958	1574	1966	1996
1950	1189	1959	1645	1967	2016
1951	1200	1960	1745	1968	2100
1952	1253	1961	1885	1969	B2150
1953	1293	1962	1945	1970	B2160
1954	1353	1963	1951	1971	B2170
1955	1403	----	----	----	----

A Parts 12-15 B In press.

SELECTED REFERENCES

American Public Health Association, and others 1971, Standard methods for the examination of water and wastewater, 13th ed.: Am. Public Health Assoc., New York, 874 p.

Brown, Eugene, Skougstad, M. W., and Fishman, M. J., 1970, Methods for collection and analysis of water samples for dissolved minerals and gases: U.S. Geol. Survey Techniques of Water-Resources Inv., book 5, chap. A1, 160 p.

Colby, B. R., 1963, Fluvial sediments--a summary of source, transportation, deposition, and measurement of sediment discharge: U.S. Geol. Survey Bull. 1181-A, 47 p.

Colby, B. R., and Hembree, C. H., 1955, Computations of total sediment discharge, Niobrara River near Cody, Nebraska: U.S. Geol. Survey Water-Supply Paper 1357, 187 p.

Colby, B. R., and Hubbell, D. W., 1961, Simplified methods for computing total sediment discharge with the modified Einstein procedure: U.S. Geol. Survey Water-Supply Paper 1593, 17 p.

Guy, H. P., 1970, Fluvial sediment concepts: U.S. Geol. Survey Techniques of Water-Resources Inv., book 3, chap. C1, 55 p.

1969, Laboratory theory and methods for sediment analysis: U.S. Geol. Survey Techniques of Water-Resources Inv., book 5, chap. C1, 58 p.

Guy, H. P., and Norman, V. W., 1970, Field methods for measurement of fluvial sediment: U.S. Geol. Survey Techniques of Water-Resources Inv., book 3, chap. C2, 59 p.

Hem, J. D., 1970, Study and interpretation of the chemical characteristics of natural water, 2d ed.: U.S. Geol. Survey Water-Supply Paper 1473, 363 p.

Laird, L. B., 1964, Chemical quality of surface waters of the Snake River basin: U.S. Geol. Survey Prof. Paper 417D, 47 p.

Langbein, W. B., and Iseri, K. T., 1960, General introduction and hydrologic definitions: U.S. Geol. Survey Water-Supply Paper 1541-A, 29 p.

Porterfield, George, 1972, Computations of fluvial-sediment discharge: U.S. Geol. Survey Techniques of Water Resources Inv., book 3, chap. C3, 66 p.

Ritter, J. R., and Helley, E. J., 1969, Optical method for determining particle sizes of coarse sediment: U.S. Geol. Survey Techniques of Water-Resources Inv., book 5, chap. C3, 33 p. (open file).

U.S. Inter-Agency Committee on Water Resources, Subcommittee on Sedimentation, A study of methods used in measurement and analysis of sediment loads in streams. Published by the St. Anthony Falls Hydraulic Laboratory, Minneapolis, Minn.

_____ 1941, Methods of analyzing sediment samples: Rept. 4.

_____ 1953, Accuracy of sediment size analyses made by the bottom-withdrawal-tube method: Rept. 10.

_____ 1957, The development and calibration of visual accumulation tube: Rept. 11.

_____ 1957, Some fundamentals of particle size analysis: Rept. 12.

_____ 1959, Federal Inter-agency sedimentation instruments and reports: Rept. AA.

_____ 1961, The single stage sampler for suspended sediment: Rept. 13.

_____ 1963, Determinations of fluvial sediment discharge: Rept. 14.

Table 4.--Factors for converting English units to International System (SI) units

The following factors may be used to convert the English units published herein to the International System of Units (SI). Subsequent reports will contain both the English and SI unit equivalents in the station manuscript descriptions until such time that all data will be published in SI units.

Multiply English units	By	To obtain SI units
	Length	
inches (in)	25.4	millimeters (mm)
	.0254	meters (m)
feet (ft)	.3048	meters (m)
yards (yd)	.9144	meters (m)
rods	5.0292	meters (m)
miles (mi)	1.609	kilometers (km)
	Area	
acres	4047	square meters (m^2)
	.4047	*hectares (ha)
	.4047	square hectometer (hm^2)
	.004047	square kilometers (km^2)
square miles (mi^2)	2.590	square kilometers (km^2)
	Volume	
gallons (gal)	3.785	**liters (l)
	3.785	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons (10^6 gal)	3785	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	28.32	cubic decimeters (dm^3)
	.02832	cubic meters (m^3)
cfs-day (ft^3/s-day)	2447	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1233	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	28.32	liters per second (l/s)
	28.32	cubic decimeters per second (dm^3/s)
	.02832	cubic meters per second (m^3/s)
gallons per minute (gpm)	.06309	liters per second (l/s)
	.06309	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day (mgd)	43.81	cubic decimeters per second (dm^3/s)
	.04381	cubic meters per second (m^3/s)
	Mass	
ton (short)	.9072	tonne (t)

*The unit hectare is approved for use with the International System (SI) for a limited time. See NBS Special Bulletin 330, p.15, 1972 edition.

**The unit liter is accepted for use with the International System (SI). See NBS Special Bulletin 330, p. 13, 1972 edition.

12010000 NASELLE RIVER NEAR NASELLE, WASH.

LOCATION.--Lat 46°22'23", long 123°44'44", in SW¼SW¼ sec.1, T.10 N., R.9 W., Pacific County, at county highway bridge, 0.1 mi (0.2 km) downstream from gaging station, 2.1 mi (3.4 km) upstream from Salmon Creek, 3.4 mi (5.5 km) east of Naselle and at mile 17.3 (27.8 km).

DRAINAGE AREA.--54.8 mi^2 (142 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1965 to September 1970, January 1973 to September 1973 (discontinued). Water temperatures: August 1963 to September 1973 (discontinued).

EXTREMES.--1972-73:
Water temperatures: Maximum, 19.5°C July 27; minimum, 0.5°C Dec. 7-13.

Period of record:
Water temperatures: Maximum, 23.0°C July 30, 1965, Aug. 15, 17, 1967; minimum, 0.5°C Dec. 7-13, 1972.

REMARKS.--Temperature recorder at gaging station 0.1 mi (0.2 km) upstream from sampling site. Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
JAN.								
08...	1350	288	.61	.00	.04	.16	.20	.01
22...	1405	615	.61	.00	.04	.03	.07	.00
FEB.								
05...	1410	313	.55	.00	.06	.07	.13	.00
20...	1320	172	.45	.00	.14	.35	.49	.01
MAR.								
05...	1435	400	.54	.00	.05	.18	.23	.00
19...	1430	860	.58	.02	.04	.20	.24	.02
APR.								
02...	1415	240	.45	.00	.05	.13	.18	.01
16...	1425	334	.37	.00	.06	.10	.16	.03
MAY								
07...	1330	133	.34	.00	.09	.18	.27	.01
14...	1445	142	.30	.01	.06	.09	.15	.00
JUNE								
05...	1430	146	.35	.00	.05	.08	.13	.01
18...	1500	444	.44	.00	.07	.00	.07	.04
JULY								
10...	1750	121	.29	.00	.18	.13	.31	.00
23...	1450	75	.10	.00	.03	.12	.15	.01
AUG.								
13...	1325	42	.11	.00	.05	.12	.17	.04
27...	1335	35	.10	.00	.08	.17	.25	.00
SEP.								
10...	1405	28	.11	.00	.10	.20	.30	.01
24...	1255	372	.25	.00	.07	.27	.34	.02

12010000 NASELLE RIVER NEAR NASELLE, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)
JAN.								
08...	.00	62	7.3	2.0	10	4	14.5	<100
22...	.00	59	7.0	5.9	10	3	13.1	150
FEB.								
05...	.00	59	7.5	5.0	7	2	13.4	100
20...	.00	190	7.3	6.1	8	2	13.6	80
MAR.								
05...	.00	60	7.4	7.9	13	3	12.4	530
19...	.01	460	7.8	6.6	15	6	12.4	350
APR.								
02...	.01	860	7.5	8.9	14	3	12.7	300
16...	.01	67	7.6	9.7	63	4	11.8	800
MAY								
07...	.00	130	7.3	9.7	[illegible]	2	12.1	90
14...	.00	78	7.9	17.5	[illegible]	1	10.6	300
JUNE								
05...	.00	69	7.4	15.1	13	1	10.9	500
18...	.00	130	7.5	11.7	21	3	11.6	750
JULY								
10...	.00	89	7.7	14.6	12	1	10.6	250
23...	.00	84	7.6	13.5	62	1	10.7	400
AUG.								
13...	.00	96	7.6	16.7	16	1	9.7	420
27...	.00	160	7.8	13.7	26	2	10.8	1600
SEP.								
10...	.00	80	7.7	17.6	23	1	10.0	480
24...	.00	190	7.3	12.7	49	6	10.4	6400

12010000 NASELLE RIVER NEAR NASELLE, WASH.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.5	10.5	7.0	5.5	7.0	7.0	8.5	8.5	6.5	6.0	9.0	8.0
2	13.5	11.5	8.5	7.0	7.0	6.0	8.5	7.0	6.5	6.0	8.5	8.0
3	13.0	11.5	9.5	8.5	6.0	4.5	7.0	6.0	6.5	6.0	8.5	8.0
4	12.0	10.5	9.5	9.0	4.5	3.0	6.0	5.5	6.0	5.0	9.0	8.5
5	10.5	9.5	9.0	9.0	3.0	1.0	5.5	5.5	5.0	4.5	9.0	8.5
6	10.5	9.5	9.0	9.0	1.5	1.0	5.5	4.0	5.0	4.5	9.0	8.5
7	11.5	10.0	9.0	8.5	1.0	0.5	4.0	3.5	5.0	4.5	9.0	8.5
8	11.0	10.5	9.0	8.0	0.5	0.5	3.5	3.0	5.5	5.0	9.0	8.0
9	11.0	10.5	8.5	8.5	0.5	0.5	3.5	3.0	6.0	5.5	9.0	8.5
10	10.5	9.0	8.5	8.0	0.5	0.5	4.5	3.5	6.0	6.0	9.0	8.5
11	9.5	9.0	8.0	6.5	0.5	0.5	5.5	4.5	7.0	6.0	8.5	7.0
12	9.5	8.5	7.0	6.5	0.5	0.5	7.0	5.5	7.0	6.5	8.5	8.0
13	9.5	9.0	8.0	7.0	1.0	0.5	8.5	7.0	6.5	6.0	8.5	7.0
14	10.0	9.5	8.0	6.5	1.5	1.0	8.5	8.5	6.5	6.0	8.5	7.0
15	10.0	9.0	6.5	6.0	2.0	1.5	8.5	8.5	7.0	6.5	9.0	8.0
16	9.5	9.0	6.5	6.0	4.5	2.0	8.5	8.5	8.0	7.0	9.0	8.0
17	9.0	8.5	6.5	6.0	5.5	4.5	8.5	8.5	8.0	7.0	8.0	6.5
18	9.0	9.0	7.0	6.0	7.0	5.5	8.5	8.0	7.0	6.0	7.0	6.5
19	9.0	9.0	7.0	6.5	7.0	7.0	8.0	6.5	6.0	5.5	8.0	6.5
20	9.0	9.0	6.5	6.0	8.0	7.0	7.0	7.0	6.0	5.5	8.5	7.0
21	9.5	9.0	6.5	6.0	9.5	8.0	7.0	6.5	6.0	5.5	8.0	7.0
22	10.5	9.5	7.0	6.5	9.5	9.5	6.5	6.0	6.5	5.5	8.0	6.5
23	10.5	9.5	7.0	6.5	9.5	9.0	6.5	6.0	7.0	6.0	8.0	6.5
24	9.5	8.0	6.5	6.5	9.0	9.0	7.0	6.5	8.0	7.0	8.5	6.5
25	8.5	7.0	7.0	6.5	9.0	9.0	7.0	6.5	8.5	8.0	8.5	8.0
26	8.5	7.0	7.0	6.5	9.5	9.0	6.5	5.5	9.0	8.5	8.5	7.0
27	8.5	8.0	6.5	6.0	9.0	9.0	6.5	5.5	9.5	9.0	8.5	7.0
28	8.0	7.0	6.5	6.0	9.0	8.5	6.5	6.0	9.5	8.5	8.0	6.5
29	7.0	5.5	7.0	6.5	8.5	8.0	6.5	6.5	---	---	8.0	6.5
30	5.5	4.5	7.0	7.0	8.5	8.0	6.5	6.5	---	---	8.0	7.0
31	5.5	5.0	---	---	8.5	8.0	6.5	6.0	---	---	8.0	7.0
MONTH	13.5	4.5	9.5	5.5	9.5	0.5	8.5	3.0	9.5	4.5	9.0	6.5

12010000 NASELLE RIVER NEAR NASELLE, WASH.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.5	6.5	13.0	10.0	11.0	10.0	13.0	11.0	18.0	15.0	14.0	10.5
2	9.0	6.5	11.5	10.5	10.0	9.5	14.5	11.0	18.0	14.5	14.5	11.0
3	9.0	7.0	12.0	10.0	10.5	10.0	15.0	11.5	16.5	15.5	15.0	11.5
4	10.0	8.5	12.0	10.5	14.5	10.5	14.5	13.5	16.0	15.0	16.0	13.0
5	10.0	8.5	11.0	10.5	15.0	11.5	13.5	12.0	15.0	14.5	16.5	14.5
6	9.5	7.0	10.5	10.0	14.0	11.5	13.0	11.5	16.5	14.5	16.0	15.0
7	9.5	7.0	10.0	9.5	12.0	11.5	14.0	12.0	16.5	15.0	15.0	14.0
8	9.5	8.5	10.0	9.5	13.0	11.5	14.0	13.0	16.5	15.0	15.0	13.0
9	10.0	9.5	11.0	9.5	13.5	10.5	16.5	13.0	16.0	15.0	15.5	12.0
10	12.0	9.5	11.5	9.5	14.0	10.0	15.5	13.5	15.0	14.0	17.0	14.0
11	13.0	9.5	13.0	9.5	15.0	11.0	15.5	11.5	16.5	13.5	16.5	15.5
12	13.0	10.5	14.5	11.0	14.0	12.0	16.5	12.0	18.0	14.5	16.0	14.5
13	14.0	10.5	16.0	12.0	13.0	11.5	18.0	14.0	16.5	15.0	15.0	13.0
14	11.5	10.0	16.0	14.0	12.0	11.0	18.5	14.5	15.5	14.0	14.5	13.5
15	10.0	9.5	15.5	13.0	11.0	10.5	18.5	15.0	14.5	13.5	14.5	11.5
16	10.0	9.5	16.5	12.0	11.0	10.0	19.0	15.5	14.0	13.5	14.0	11.5
17	9.5	9.0	17.0	14.0	10.0	9.5	18.5	15.5	14.0	11.5	13.5	13.0
18	9.0	8.0	15.5	13.5	10.5	9.5	18.5	15.5	14.5	11.0	13.5	13.5
19	9.0	7.0	13.5	11.5	13.0	10.0	18.0	15.5	14.5	11.0	13.5	13.0
20	10.0	7.0	13.0	10.5	14.5	11.0	15.5	14.5	15.0	12.0	13.5	13.0
21	10.0	8.0	14.5	10.0	15.0	13.0	15.0	14.0	15.0	11.5	13.5	13.0
22	10.0	9.5	13.0	11.5	15.0	14.0	14.5	13.5	14.5	11.5	13.5	13.0
23	10.0	9.0	11.5	11.0	14.5	13.0	13.5	12.0	14.0	12.0	13.0	12.0
24	10.0	9.0	11.0	10.0	13.0	12.0	14.5	11.0	13.0	11.5	13.0	12.0
25	11.5	8.5	10.0	8.5	12.0	11.5	17.0	13.0	15.0	12.0	12.0	11.0
26	10.5	10.0	10.0	8.5	13.0	11.5	18.5	15.0	14.5	13.0	13.0	11.0
27	10.5	9.5	9.5	8.5	15.0	12.0	19.5	15.5	14.0	12.0	13.5	11.5
28	10.0	8.5	11.5	8.5	14.5	13.0	19.0	16.5	13.5	13.0	13.5	12.0
29	10.5	8.5	13.5	10.5	13.5	11.5	19.0	16.0	14.5	13.5	14.0	13.0
30	12.0	9.0	13.5	11.5	11.5	11.0	18.5	15.5	14.5	13.5	13.5	11.0
31	---	---	12.0	11.0	---	---	17.0	15.0	14.0	11.5	---	---
MONTH	14.0	6.5	17.0	8.5	15.0	9.5	19.5	11.0	18.0	11.0	17.0	10.5

12010710 NASELLE RIVER AT NASELLE, WASH.

LOCATION.--Lat 46°21'59", long 123°48'29", in SW¼NW¼ sec.9, T.10 N., R.9 W., Pacific County, at State Highway 401 crossing, 400 ft (122 m) downstream from South Fork at Naselle.

DRAINAGE AREA.--101 mi² (262 km²).

PERIOD OF RECORD.--Chemical analyses: October 1972 to December 1972 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, OCTOBER TO DECEMBER 1972

DATE	TIME	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
OCT.								
03...	1340	.22	.00	.01	.21	.22	.01	.00
16...	1435	.08	.00	.04	.17	.21	.01	.00
30...	1445	.25	.00	.04	.14	.18	.01	.00
NOV.								
13...	1430	.59	.00	.04	.00	.04	.01	.00
27...	1345	.65	.00	.06	.08	.14	.02	.00
DEC.								
19...	1400	.83	.01	.16	.35	.51	.08	.00
26...	1415	.62	.02	.16	.26	.42	.16	.00

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.							
03...	--	7.2	12.5	22	2	9.1	1200
16...	30	7.7	10.3	53	1	10.2	1700
30...	130	7.3	6.3	58	3	11.9	2700
NOV.							
13...	280	7.3	9.0	24	3	11.4	900
27...	152	7.1	7.0	6	4	12.1	900
DEC.							
19...	97	7.3	8.2	32	25	11.7	1100
26...	38	6.9	8.0	51	55	12.1	2000

12011103 NORTH NEMAH RIVER NEAR NEMAH, WASH.

LOCATION.--Lat 46°30'50", long 123°51'42", in NW¼NW¼ sec.24, T.12 N., R.10 W., Pacific County, at road crossing 1.4 mi (2.3 km) east of Nemah Junction.

DRAINAGE AREA.--21.5 mi^2 (55.7 km^2), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
OCT.							
03...	1245	26	.18	.00	.02	.01	.00
16...	1330	23	.10	.00	.07	.01	.00
30...	1335	22	.13	.00	.06	.02	.00
NOV.							
13...	1330	104	.42	.00	.12	.01	.00
27...	1245	118	.44	.00	.05	.01	.00
DEC.							
19...	1255	738	.65	.00	.07	.06	.00
26...	1315	1990	.51	.01	.07	.12	.00
JAN.							
08...	1240	92	.41	.00	.04	.01	.00
22...	1305	186	.40	.00	.04	.00	.00
FEB.							
05...	1315	107	.38	.00	.08	.00	.00
20...	1230	64	.30	.00	.04	.01	.00
MAR.							
05...	1335	117	.35	.00	.06	.00	.00
19...	1315	385	.41	.00	.11	.02	.00
APR.							
02...	1245	72	.30	.00	.06	.01	.00
16...	1335	125	.24	.00	.09	.05	.00
MAY							
07...	1245	42	.18	.00	.11	.01	.00
14...	1400	50	.20	.00	.09	.01	.01
JUNE							
05...	1345	48	.20	.00	.05	.01	.00
18...	1410	134	.32	.02	.13	.02	.00
JULY							
10...	1640	61	.16	.01	.14	.02	.00
23...	1325	25	.16	.00	.07	.02	.00
AUG.							
13...	1220	16	.10	.00	.07	.02	.00
27...	1230	16	.12	.00	.10	.01	.01
SEP.							
10...	1250	14	.10	.00	.12	.01	.01
24...	1145	161	.18	.01	.12	.07	.00

12011103 NORTH NEMAH RIVER NEAR NEMAH, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)
OCT.							
03...	53	7.4	12.2	31	2	9.5	1200
16...	74	7.2	11.2	33	0	10.1	1300
30...	70	7.4	7.0	35	3	11.8	1000
NOV.							
13...	72	7.4	7.2	28	2	11.0	1300
27...	45	7.3	7.0	3	3	12.1	1500
DEC.							
19...	190	7.6	8.4	20	20	11.4	>1600
26...	39	7.1	8.5	54	40	11.3	2500
JAN.							
08...	66	7.2	1.8	12	5	14.0	180
22...	64	7.2	6.5	18	5	12.5	>1600
FEB.							
05...	67	7.1	6.3	14	4	12.9	400
20...	68	7.1	6.1	15	3	12.8	200
MAR.							
05...	70	7.3	8.4	22	3	11.9	1600
19...	58	7.0	7.9	36	10	12.0	500
APR.							
02...	71	7.2	9.2	23	3	12.6	170
16...	66	7.2	10.0	42	7	11.2	2200
MAY							
07...	77	7.4	10.1	23	2	11.6	250
14...	70	7.2	15.5	26	2	10.5	500
JUNE							
05...	75	7.4	13.8	24	2	10.8	>8000
18...	35	7.4	11.6	32	5	11.1	700
JULY							
10...	83	7.5	14.0	24	1	10.2	700
23...	105	7.4	14.5	93	2	9.0	900
AUG.							
13...	84	7.3	15.9	30	2	8.9	400
27...	170	7.4	13.1	36	3	9.9	>1600
SEP.							
10...	81	7.3	16.0	36	2	9.1	1500
24...	39	6.9	12.7	116	15	9.5	13000

12013500 WILLAPA RIVER NEAR WILLAPA, WASH.

LOCATION.--Lat 46°39'00", long 123°39'10", in NW corner sec.2, T.13 N., R.8 W., Pacific County, at Bullard Road bridge, 0.5 mi (0.8 km) downstream from gaging station and Mill Creek, 1.8 mi (2.9 km) southeast of Willapa, and at mile 17.7 (28.5 km).

DRAINAGE AREA.--130 mi^2 (327 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1965 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance, and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
OCT.								
30...	1150	82	.09	.00	.07	.17	.24	.01
JAN.								
08...	1115	500	.83	.00	.06	.14	.20	.01
22...	1130	1090	.79	.00	.08	.10	.18	.00
MAR.								
05...	1200	700	.71	.01	.06	.16	.22	.01
MAY								
14...	1315	233	.30	.01	.11	.06	.17	.02
JULY								
10...	1430	105	.19	.00	.24	.21	.45	.01
SEP.								
10...	1120	28	.13	.00	.15	.22	.37	.01

DATE	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL PER 100 ML)
OCT.								
30...	.00	150	7.3	5.8	73	5	12.2	500
JAN.								
08...	.00	65	7.0	.8	20	5	14.2	350
22...	.00	58	7.0	5.3	16	5	12.7	500
MAR.								
05...	.00	64	7.1	7.7	24	3	12.2	260
MAY								
14...	.00	70	7.2	17.3	32	2	10.2	250
JULY								
10...	.00	78	7.5	17.2	47	3	9.7	325
SEP.								
10...	.00	84	7.3	17.1	42	2	8.3	700

12014500 SOUTH FORK WILLAPA RIVER NEAR RAYMOND, WASH.

LOCATION.--Lat 46°37'42", long 123°42'12", in NW¼SE¼ sec.8, T.13 N., R.8 W., Pacific County, at logging road crossing 200 ft (61 m) downstream from former gaging station and 4 mi (6.4 km) southeast of Raymond.

DRAINAGE AREA.--27.8 mi^2 (72.0 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
OCT.							
03...	1135	--	.13	.00	.00	.04	.00
16...	1210	57	.10	.00	.03	.00	.00
30...	1220	64	.06	.01	.03	.01	.00
NOV.							
13...	1215	121	.32	.00	.05	.01	.00
27...	1140	134	.33	.00	.05	.01	.00
DEC.							
19...	1145	334	.60	.00	.11	.02	.00
26...	1230	1170	.48	.01	.15	.09	.00
JAN.							
08...	1140	199	.36	.00	.08	.01	.00
22...	1200	267	.37	.00	.08	.00	.00
FEB.							
05...	1205	201	.43	.00	.05	.00	.00
20...	1115	141	.26	.00	.14	.01	.01
MAR.							
05...	1220	167	.34	.01	.05	.00	.00
19...	1200	273	.38	.00	.09	.01	.00
APR.							
02...	1130	92	.26	.00	.06	.01	.01
16...	1220	176	.50	.00	.10	.12	.00
MAY							
07...	1120	103	.18	.00	.08	.01	.00
14...	1245	116	.20	.01	.09	.01	.00
JUNE							
05...	1215	100	.15	.00	.04	.00	.00
18...	1320	183	.27	.00	.11	.02	.00
JULY							
10...	1510	100	.16	.00	.18	.01	.01
23...	1225	73	.11	.00	.03	.01	.00
AUG.							
13...	1120	68	.09	.00	.06	.01	.00
27...	1140	62	.10	.00	.10	.01	.00
SEP.							
10...	1155	59	.09	.00	.09	.00	.00
24...	1055	145	.13	.01	.06	.03	.00

12014500 SOUTH FORK WILLAPA RIVER NEAR RAYMOND, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.							
03...	56	7.2	10.8	14	2	10.6	700
16...	58	7.2	8.7	28	0	11.3	300
30...	115	7.3	5.2	38	3	12.6	350
NOV.							
13...	66	7.7	8.0	23	2	11.6	440
27...	50	7.2	5.8	4	4	12.5	330
DEC.							
19...	57	7.2	8.3	20	7	11.5	1200
26...	41	7.1	8.2	49	30	11.8	1700
JAN.							
08...	65	7.3	1.8	9	5	13.9	150
22...	64	7.2	5.7	12	4	12.8	200
FEB.							
05...	64	7.2	5.0	10	2	13.0	100
20...	70	7.3	6.2	9	5	12.9	110
MAR.							
05...	66	7.2	7.8	17	3	12.2	100
19...	63	7.0	7.0	25	5	12.1	210
APR.							
02...	67	7.3	8.1	15	2	12.7	160
16...	64	7.2	9.6	29	6	11.5	800
MAY							
07...	75	7.4	9.1	18	2	12.0	220
14...	72	7.2	15.3	18	2	10.8	200
JUNE							
05...	77	7.4	12.6	19	1	11.0	230
18...	68	7.5	10.8	21	5	11.4	800
JULY							
10...	78	7.7	13.4	14	1	10.6	225
23...	100	7.5	12.2	8	2	10.6	350
AUG.							
13...	85	7.5	14.6	20	1	9.7	680
27...	77	7.5	11.3	25	2	10.8	1600
SEP.							
10...	100	7.5	14.3	21	1	10.2	1000
24...	68	7.3	12.1	56	8	8.9	11000

12017000 NORTH RIVER NEAR RAYMOND, WASH.

LOCATION.--Lat 46°49'46", long 123°49'48", in SW¼NW¼ sec.32, T.16 N., R.9 W., Grays Harbor County, at American Mill Road crossing, 3.8 mi (6.1 km) upstream from gaging station and 11 mi (17.7 km) northwest of Raymond at mile 10.7 (17.2 km).

DRAINAGE AREA.--210 mi^2 (544 km^2), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).
Water temperatures: July 1963 to September 1973 (discontinued).

EXTREMES.--1972-73:
Water temperatures: Maximum, 20.5°C July 18; minimum, freezing point Dec. 9-16.

Period of record:
Water temperatures: Maximum, 23.5°C Aug. 15, 18, 19, 1967; minimum, freezing point Dec. 9-16, 1972.

REMARKS.--Temperature recorder at gaging station 3.8 mi (6.1 km) downstream from sampling site. Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT.										
03...	1015	157	4.0	1.2	5.8	.5	25	--	21	5.6
16...	1050	101	4.5	1.7	6.3	1.5	24	--	20	8.4
30...	1055	261	4.3	1.5	5.5	1.1	23	--	19	6.0
NOV.										
13...	1125	700	3.2	1.1	5.7	4.7	20	--	16	6.8
27...	1055	1110	3.3	1.2	4.8	.9	14	--	11	5.8
DEC.										
19...	1050	3170	2.6	.8	4.3	.8	7	0	6	6.3
26...	1120	7370	1.8	.6	3.3	.8	8	0	7	4.7
JAN.										
08...	1030	793	4.4	.9	3.7	.3	19	0	16	3.6
22...	1045	1530	2.6	1.0	4.9	.9	11	--	9	6.1
FEB.										
05...	1115	772	2.9	1.0	4.2	2.2	14	--	11	4.0
20...	1030	490	3.2	1.2	5.5	.8	17	--	14	5.2
MAR.										
05...	1105	894	2.7	.9	4.7	.8	14	--	11	5.9
19...	1030	1390	2.6	.9	4.7	.7	11	--	9	4.7
APR.										
02...	1025	598	3.1	1.1	4.6	.7	16	--	13	6.3
16...	1130	500	3.3	1.1	5.8	.7	18	--	15	4.9
MAY										
07...	1035	282	3.6	1.3	5.3	.9	21	--	17	5.3
14...	1115	337	3.2	1.2	4.8	.5	19	--	16	6.5
JUNE										
05...	1125	230	3.0	1.2	5.2	.7	24	--	20	4.2
18...	1230	934	2.8	1.1	4.6	.6	20	--	16	4.3
JULY										
10...	1330	210	3.7	1.5	5.4	.8	27	--	22	4.7
23...	1110	122	4.2	1.5	5.8	.8	26	--	21	5.6
AUG.										
13...	1005	73	4.6	1.9	7.0	.9	30	--	25	7.6
27...	1015	66	4.7	1.9	6.3	1.1	29	--	24	5.3
SEP.										
10...	1005	64	5.0	1.8	6.3	1.0	32	--	26	5.0
24...	0955	308	4.2	1.6	6.4	1.2	28	--	23	5.7

12017000 NORTH RIVER NEAR RAYMOND, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)	ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)
OCT.									
03...	4.8	.17	.00	.16	.40	.56	.14	.01	15
16...	6.5	.06	.00	.18	.50	.68	.02	.00	18
30...	5.3	.08	.01	.12	.42	.54	.03	.00	17
NOV.									
13...	6.7	.64	.00	.07	.01	.08	.01	.00	13
27...	4.5	.69	.00	.11	.20	.31	.03	.00	13
DEC.									
19...	4.9	.92	.00	.19	.32	.51	.07	.00	10
26...	4.2	.69	.01	.08	.33	.41	.09	.00	7
JAN.									
08...	3.1	.52	.00	.12	.22	.34	.03	.00	15
22...	6.0	.59	.01	.10	.13	.23	.00	.00	11
FEB.									
05...	4.7	.47	.01	.09	.13	.22	.02	.00	11
20...	5.8	.35	.01	.20	.29	.49	.02	.00	13
MAR.									
05...	5.1	.50	.02	.10	.20	.30	.01	.01	10
19...	4.3	.40	.00	.15	.30	.45	.02	.00	10
APR.									
02...	4.4	.29	.00	.06	.07	.13	.02	.00	12
16...	4.4	.15	.00	.12	.01	.13	.07	.00	13
MAY									
07...	5.0	.14	.00	.24	.34	.58	.02	.00	14
14...	5.2	.18	.00	.10	.02	.12	.02	.01	13
JUNE									
05...	4.9	.12	.00	.08	.04	.12	.02	.00	12
18...	4.2	.29	.00	.13	.09	.22	.09	.00	12
JULY									
10...	4.7	.11	.00	.18	2.4	2.6	.03	.01	15
23...	5.3	.10	.00	.07	.18	.25	.03	.01	17
AUG.									
13...	5.6	.04	.00	.12	.11	.23	.03	.01	19
27...	5.5	.11	.00	.16	.16	.32	.18	.01	20
SEP.									
10...	5.8	.04	.00	.17	.27	.44	.02	.01	20
24...	5.5	.19	.01	.12	.24	.36	.04	.01	17

12017000 NORTH RIVER NEAR RAYMOND, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	NON-CARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.									
03...	0	45	7.1	10.8	27	3	9.7	3.2	300
16...	0	66	7.1	8.9	103	1	10.5	3.1	60
30...	0	72	7.2	6.2	120	2	11.2	2.3	600
NOV.									
13...	0	120	9.3	8.2	67	3	11.2	.0	600
27...	2	53	7.0	6.7	12	3	11.1	2.2	800
DEC.									
19...	4	94	6.6	6.3	86	20	11.6	2.8	>1600
26...	0	41	7.0	8.3	59	37	12.2	1.3	2500
JAN.									
08...	0	77	6.9	1.0	5	7	13.8	3.8	300
22...	2	61	6.8	5.3	35	9	12.3	2.8	800
FEB.									
05...	0	57	6.9	5.4	29	5	12.7	2.8	300
20...	0	65	6.9	5.8	40	5	12.3	3.4	200
MAR.									
05...	0	59	7.0	8.1	36	5	11.6	2.2	200
19...	1	52	7.2	6.6	23	5	11.7	1.1	400
APR.									
02...	0	55	7.0	8.1	50	5	11.8	2.6	300
16...	0	61	7.2	10.5	55	3	11.0	1.8	300
MAY									
07...	0	68	7.2	11.2	28	4	10.5	2.1	<100
14...	0	61	7.3	15.3	59	5	9.9	1.5	200
JUNE									
05...	0	84	7.4	14.8	36	3	10.1	1.5	130
18...	0	49	7.1	12.1	82	10	10.4	2.5	3000
JULY									
10...	0	71	7.4	15.5	76	3	9.2	1.7	<400
23...	0	67	7.3	16.7	40	2	8.4	2.1	250
AUG.									
13...	0	88	7.3	17.4	96	2	8.4	2.4	400
27...	0	150	7.4	14.4	96	4	8.9	1.8	1500
SEP.									
10...	0	84	7.3	15.0	93	2	8.4	2.6	400
24...	0	59	7.1	13.9	135	6	10.1	3.6	2300

12017000 NORTH RIVER NEAR RAYMOND, WASH --Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	10.0	9.5	5.0	5.0	6.0	5.5	6.5	6.5	6.0	6.0	7.0	7.0
2	10.5	10.0	5.5	5.0	6.0	6.0	6.5	5.0	6.0	6.0	7.0	7.0
3	10.5	10.5	6.5	5.5	6.0	6.0	6.0	6.0	6.0	6.0	7.0	7.0
4	10.5	10.0	8.0	6.5	6.0	4.5	6.0	5.0	6.0	5.5	7.0	7.0
5	10.0	9.5	8.0	8.0	4.5	3.0	5.0	4.5	5.5	5.0	7.0	7.0
6	9.5	9.0	8.0	8.0	3.0	1.5	4.5	4.0	5.0	4.5	7.0	7.0
7	9.5	9.0	8.0	8.0	1.5	0.5	4.0	3.5	4.5	4.5	7.0	7.0
8	9.5	9.0	8.0	8.0	0.5	0.5	3.5	2.0	4.5	4.5	7.0	7.0
9	9.5	9.5	8.0	8.0	0.5	0.0	2.0	1.5	4.5	4.5	8.0	7.0
10	9.5	9.0	8.0	8.0	0.5	0.0	2.0	1.5	5.0	4.5	8.0	7.0
11	9.0	9.0	8.0	7.0	0.0	0.0	3.5	2.0	5.0	5.0	7.0	7.0
12	9.0	8.5	7.0	7.0	0.0	0.0	4.0	3.5	5.5	5.0	7.0	7.0
13	8.5	8.5	7.0	6.5	0.0	0.0	5.5	4.0	5.5	5.5	7.0	7.0
14	9.0	8.5	6.5	6.0	0.0	0.0	6.0	5.5	5.5	5.5	7.0	7.0
15	9.0	8.5	6.0	5.5	0.0	0.0	6.5	6.0	5.5	5.5	7.0	6.5
16	8.5	8.0	5.5	5.5	1.0	0.0	6.5	6.5	5.5	5.5	7.0	7.0
17	8.5	8.0	5.5	5.0	2.0	1.0	6.5	6.5	6.0	5.5	7.0	6.5
18	8.5	8.0	5.0	5.0	4.0	2.0	6.5	6.5	6.0	6.0	6.5	6.5
19	8.5	8.5	5.0	5.0	5.0	4.0	6.5	6.0	6.0	6.0	6.5	6.0
20	8.5	8.5	5.5	5.0	6.0	5.0	6.0	6.0	6.0	6.0	6.0	6.0
21	8.5	8.5	5.5	5.5	6.5	6.0	6.0	6.0	6.0	5.5	6.5	6.0
22	9.0	8.5	5.5	5.5	6.5	6.5	6.0	5.5	5.5	5.5	6.5	6.5
23	9.0	9.0	5.5	5.5	6.5	6.5	5.5	5.5	5.5	5.0	6.5	6.5
24	9.0	9.0	5.5	5.5	6.5	6.5	6.0	5.5	5.5	5.5	7.0	6.5
25	9.0	8.5	5.5	5.5	6.5	6.5	6.0	6.0	6.0	5.5	7.0	7.0
26	8.5	8.5	6.0	5.5	6.5	6.5	6.0	5.5	6.5	6.0	7.0	7.0
27	8.5	8.0	6.0	6.0	7.0	6.5	5.5	5.0	7.0	6.5	7.0	7.0
28	8.0	7.0	6.0	5.5	7.0	7.0	5.5	5.0	7.0	7.0	7.0	7.0
29	7.0	6.5	5.5	5.5	7.0	6.5	6.0	5.5	---	---	7.0	7.0
30	6.5	5.5	5.5	5.5	6.5	6.5	6.0	6.0	---	---	7.0	7.0
31	5.5	5.0	---	---	6.5	6.5	6.0	6.0	---	---	7.0	7.0
MONTH	10.5	5.0	8.0	5.0	7.0	0.0	6.5	1.5	7.0	4.5	8.0	6.0

12017000 NORTH RIVER NEAR RAYMOND, WASH.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.0	7.0	11.5	10.5	12.0	11.5	14.0	13.5	18.0	17.0	15.0	14.0
2	8.0	7.0	11.5	11.5	12.0	11.5	14.5	14.0	18.5	17.0	15.0	14.0
3	8.5	7.0	11.5	11.0	11.5	11.5	15.5	14.5	18.5	17.0	15.5	14.5
4	8.5	8.0	12.0	11.0	14.0	11.5	15.5	15.5	17.0	17.0	15.5	14.5
5	9.0	8.5	12.0	12.0	14.5	14.0	15.5	15.0	17.0	16.5	15.5	15.0
6	9.0	9.0	12.0	11.5	14.5	14.5	15.0	15.0	16.5	16.0	15.5	15.0
7	9.0	9.0	11.5	11.0	14.5	14.0	15.0	14.5	16.5	16.5	15.5	15.0
8	9.0	9.0	11.0	10.0	14.0	14.0	15.0	15.0	17.0	16.0	16.0	15.0
9	9.5	9.0	10.5	10.0	14.0	13.5	16.0	15.0	16.5	16.5	16.0	15.0
10	10.5	9.5	10.0	10.0	14.0	13.5	15.5	15.5	16.5	16.0	16.0	15.0
11	11.0	10.0	10.5	10.0	14.0	14.0	15.5	15.0	17.0	16.0	16.0	15.5
12	12.0	11.0	11.5	10.5	14.0	14.0	16.0	15.0	18.0	16.0	16.5	15.5
13	13.0	11.5	13.0	11.5	14.0	13.5	17.0	16.0	18.0	17.0	16.0	15.0
14	12.0	11.5	14.5	13.0	14.0	13.5	18.5	17.0	17.0	16.5	15.5	15.5
15	11.5	11.0	15.0	14.5	13.5	13.0	19.5	18.5	16.5	16.0	16.0	15.0
16	11.0	10.0	16.0	15.0	13.5	11.5	20.0	18.5	16.0	15.5	15.5	14.5
17	10.0	10.0	16.5	15.5	11.5	11.0	20.0	19.0	15.5	15.0	15.0	15.0
18	10.0	9.0	16.5	16.0	11.5	11.5	20.5	19.5	16.0	15.0	15.0	14.5
19	9.0	9.0	16.5	15.0	11.5	11.5	20.0	19.5	15.5	15.0	14.5	14.5
20	9.0	8.5	15.0	14.0	13.5	11.5	19.5	18.5	16.0	15.0	14.5	14.0
21	8.5	8.5	14.5	13.5	14.5	13.5	18.5	18.0	16.0	15.0	14.0	14.0
22	9.0	8.5	14.5	14.0	15.5	14.5	18.0	17.0	16.0	15.0	14.0	14.0
23	9.0	9.0	14.0	12.0	15.5	15.0	17.0	16.0	15.5	15.5	14.0	13.5
24	9.5	9.0	12.0	11.0	15.0	14.5	16.0	15.5	15.5	15.0	14.0	13.5
25	10.0	9.5	11.5	11.0	14.5	14.0	17.0	15.5	15.5	14.5	13.5	13.0
26	10.0	10.0	11.0	10.5	14.5	14.0	18.5	16.5	15.5	15.0	13.5	13.0
27	10.0	10.0	10.5	10.5	15.0	14.5	19.5	18.0	15.0	15.0	13.5	13.5
28	10.0	9.5	10.5	10.0	15.0	14.5	20.0	19.0	15.0	15.0	14.0	13.5
29	10.0	9.5	11.5	10.5	15.0	14.5	19.5	19.0	15.5	15.0	14.5	14.0
30	10.5	9.5	12.0	11.5	14.5	14.0	19.5	18.5	15.0	14.5	14.5	13.5
31	---	---	13.0	11.5	---	---	18.5	18.0	15.0	14.5	---	---
MONTH	13.0	7.0	16.5	10.0	15.5	11.0	20.5	13.5	18.5	14.5	16.5	13.0

12025020 NEWAUKUM RIVER AT CHEHALIS, WASH.

LOCATION.--Lat 46°39'01", long 122°58'46", in SW¼ sec.31, T.14 N., R.2 W., Lewis County, at State Highway 603 crossing, 800 ft (244 m) upstream from mouth of southwest edge of Chehalis.

DRAINAGE AREA.--158 mi² (409 km²).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued)

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)
OCT.											
05...	0900	50	.17	.00	.08	.47	.55	.01	.00	84	7.6
17...	1605	43	.03	.00	.08	.16	.24	.01	.00	93	7.5
31...	1705	58	.23	.00	.07	.09	.16	.01	.00	150	7.7
NOV.											
14...	1550	122	.45	.01	.05	.09	.14	.02	.00	68	7.3
28...	1600	306	.91	.00	.07	.21	.28	.03	.00	54	7.1
DEC.											
21...	1055	4000	1.1	.02	.38	1.1	1.5	.47	.00	39	6.9
28...	1125	2800	.90	.01	.10	.20	.30	.10	.00	44	6.9
JAN.											
10...	1150	340	.59	.00	.04	.14	.18	.03	.00	66	7.2
23...	1700	560	.65	.01	.04	.19	.23	.01	.00	59	7.2
FEB.											
07...	0950	275	.64	.00	.13	.11	.24	.02	.00	68	7.2
22...	1120	282	.42	.01	.05	.14	.19	.01	.00	67	7.7
MAR.											
07...	1030	420	.45	.00	.10	.14	.24	.01	.00	62	7.5
21...	1030	560	.55	.00	.06	.14	.20	.02	.01	63	7.4
APR.											
04...	1010	226	.23	.00	.07	.11	.18	.02	.02	75	7.5
18...	1030	384	.25	.00	.11	.05	.16	.02	.01	65	7.4
MAY											
09...	1125	348	.08	.00	.09	.18	.27	.02	.01	76	7.4
16...	1100	155	.02	.00	.09	.04	.13	.02	.01	80	7.4
JUNE											
07...	1030	142	.03	.00	.09	.14	.23	.02	.00	99	7.6
20...	0845	205	.17	.00	.13	.00	.13	.02	.00	79	7.6
JULY											
11...	1800	101	.03	.00	.10	.07	.17	.01	.00	90	8.0
24...	2130	64	.02	.01	.04	.13	.17	.01	.00	98	8.1
AUG.											
15...	1955	45	.02	.00	.07	.15	.22	.02	.01	112	7.8
28...	1825	36	.03	.00	.06	.14	.20	.02	.01	111	7.9
SEP.											
11...	1850	25	.05	.00	.13	.08	.21	.03	.01	115	7.8
25...	1815	142	.20	.01	.06	.25	.31	.05	.01	92	7.5

12025020 NEWAUKUM RIVER AT CHEHALIS, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT.										
05...	12.2	7	2	--	350	--	--	--	--	--
17...	12.3	33	2	11.8	600	0	8	9	1.2	150
31...	5.8	6	4	12.4	2500	0	12	4	.6	50
NOV.										
14...	7.2	14	3	12.4	500	0	4	1	.1	10
28...	6.4	0	72	12.4	2000	0	10	1	.3	70
DEC.										
21...	7.8	110	90	10.9	<16000	0	10	9	2.7	50
28...	7.0	67	33	11.6	1400	0	3	0	.0	20
JAN.										
10...	3.1	10	6	14.1	500	0	2	0	4.5	20
23...	4.8	38	6	12.8	800	0	3	5	.2	30
FEB.										
07...	2.7	24	4	13.6	250	10	2	4	.1	10
22...	6.3	13	4	13.1	640	0	3	5	.1	80
MAR.										
07...	8.4	5	4	11.7	150	0	1	5	.1	40
21...	7.1	43	7	12.0	400	0	3	3	.1	20
APR.										
04...	10.5	31	3	12.0	270	0	10	2	.1	20
18...	7.4	61	6	11.6	1000	0	9	5	.2	20
MAY										
09...	11.2	15	4	11.6	1600	0	10	6	.0	60
16...	17.7	39	2	10.7	500	0	10	6	.0	20
JUNE										
07...	16.0	14	3	9.9	4500	0	8	1	.4	40
20...	16.7	38	3	9.5	400	0	8	4	.2	10
JULY										
11...	19.9	9	3	10.2	900	0	7	1	.1	10
24...	18.4	8	1	9.9	490	0	10	3	.0	10
AUG.										
15...	18.1	28	1	9.4	1200	0	3	0	.0	0
28...	17.5	23	2	10.5	1250	0	1	3	.0	30
SEP.										
11...	19.9	25	1	9.8	200	0	3	3	.0	0
25...	14.0	91	4	--	2300	0	1	4	.0	20

12027500 CHEHALIS RIVER NEAR GRAND MOUND, WASH.

LOCATION.--Lat 46°46'34", long 123°02'04", in NE¼NE¼ sec.22, T.15 N., R.3 W., Thurston County, temperature recorder at gaging station on left bank, at downstream side of highway bridge at Meadows, 1.5 mi (2.4 km) southwest of Grand Mound, 7.0 mi (11.3 km) downstream from Skookumchuck River, and at mile 59.9 (96.4 km).

DRAINAGE AREA.--895 mi^2 (2,318 km^2).

PERIOD OF RECORD.--Water temperatures: March 1952 to September 1973.

EXTREMES.--1972-73:
Water temperatures: Maximum, 23.0°C July 16, 17, 18; minimum, 0.5°C Dec. 7-12.

Period of record:
Water temperatures: Maximum (1952-67, 1970-73), 26.5°C July 22, 23, 1959; minimum, freezing point several days during January and February 1957.

REMARKS.--Temperature recorder not operating Jan. 22-25 and Mar. 27 (no range in temperature obtained). Miscellaneous suspended sediment data published for water years 1962-64.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.5	11.0	6.5	6.0	6.0	6.0	6.0	6.0	4.5	4.5	8.0	8.0
2	11.5	11.5	6.5	6.0	6.0	6.0	6.0	6.0	4.5	4.5	8.0	7.0
3	12.0	11.5	6.5	6.5	6.0	6.0	6.0	5.5	4.5	4.5	7.0	7.0
4	12.0	11.5	7.0	6.5	6.0	4.5	5.5	4.5	4.5	4.5	7.0	7.0
5	12.0	11.5	8.5	7.0	4.5	3.0	4.5	4.0	4.5	4.5	7.0	7.0
6	11.5	11.0	8.5	8.0	3.0	1.5	4.0	3.5	4.5	4.0	8.0	7.0
7	12.0	11.5	8.0	8.0	1.5	0.5	3.5	2.0	4.0	3.5	8.5	8.0
8	13.0	12.0	8.0	8.0	0.5	0.5	2.0	1.5	4.0	4.0	8.5	8.5
9	13.0	12.0	8.0	8.0	0.5	0.5	1.5	1.5	4.0	4.0	8.5	8.5
10	12.0	11.0	8.5	8.0	0.5	0.5	1.5	1.5	4.5	4.0	8.5	8.5
11	11.0	10.5	8.0	8.0	0.5	0.5	2.0	1.5	4.5	4.5	8.5	8.0
12	10.5	10.0	8.0	7.0	1.0	0.5	3.5	2.0	5.0	4.5	8.0	7.0
13	10.5	10.0	7.0	6.5	1.0	1.0	5.0	3.5	5.5	5.0	7.0	7.0
14	10.5	10.5	6.5	6.5	1.0	1.0	6.5	5.0	5.5	5.5	7.0	6.5
15	10.5	10.0	6.5	6.5	1.0	1.0	6.5	6.5	5.5	5.5	7.0	6.5
16	10.5	10.0	6.5	6.5	1.0	1.0	6.5	6.5	5.5	5.5	8.0	7.0
17	10.0	10.0	6.5	6.5	1.0	1.0	6.5	6.5	6.5	5.5	8.0	7.0
18	10.0	10.0	6.5	6.5	4.0	1.0	6.5	6.0	6.5	6.5	7.0	6.5
19	10.0	10.0	6.5	6.5	5.5	4.0	6.0	6.0	6.5	6.5	6.5	6.5
20	10.0	10.0	6.5	6.5	6.0	5.5	6.0	5.5	6.5	6.0	6.5	6.5
21	10.0	10.0	6.5	6.5	7.0	6.0	5.5	5.5	6.0	5.5	8.0	6.5
22	10.0	10.0	6.5	6.5	7.0	7.0	---	5.5	5.5	5.5	8.0	7.0
23	10.0	10.0	6.5	6.5	7.0	7.0	---	---	6.0	5.5	8.0	7.0
24	10.0	9.5	6.5	6.0	7.0	7.0	---	---	6.0	5.5	8.5	7.0
25	9.5	9.0	6.0	6.0	7.0	7.0	---	---	6.5	6.0	8.5	8.0
26	9.0	9.0	6.0	6.0	7.0	7.0	4.0	3.5	7.0	6.5	9.0	8.5
27	9.0	8.5	6.0	6.0	7.0	7.0	3.5	3.5	8.0	7.0	---	8.0
28	8.5	8.5	6.0	6.0	7.0	7.0	3.5	3.5	8.0	8.0	8.0	7.0
29	8.5	8.0	6.0	6.0	7.0	6.5	3.5	3.5	---	---	8.0	7.0
30	8.0	6.5	6.0	6.0	6.5	6.5	4.0	3.5	---	---	7.0	7.0
31	6.5	6.5	---	---	6.5	6.0	4.5	4.0	---	---	7.0	7.0
MONTH	13.0	6.5	8.5	6.0	7.0	0.5	6.5	1.5	8.0	3.5	9.0	6.5

12027500 CHEHALIS RIVER NEAR GRAND MOUND, WASH.--Continued

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.0	7.0	12.0	11.0	18.0	17.0	16.0	15.5	21.5	20.0	15.0	13.5
2	8.0	7.0	13.0	11.5	18.0	17.0	16.0	15.5	22.0	20.5	15.5	14.0
3	8.5	8.0	13.5	12.0	17.0	17.0	16.5	15.5	22.0	20.5	16.0	14.5
4	9.0	8.5	13.5	13.0	18.0	17.0	18.0	16.5	22.0	20.5	16.0	15.0
5	9.0	9.0	14.0	13.5	18.5	18.0	18.0	17.0	21.5	20.5	16.5	16.0
6	9.5	9.0	13.5	13.5	18.5	18.5	17.0	17.0	20.5	19.5	16.5	16.0
7	9.5	9.0	13.5	13.0	18.5	18.0	18.0	17.0	20.5	19.0	16.0	15.5
8	9.5	9.0	13.0	11.5	18.0	18.0	18.0	17.0	21.0	19.5	16.0	15.0
9	9.0	8.5	12.0	11.5	18.0	18.0	19.0	18.0	21.0	20.0	16.5	15.5
10	10.0	9.0	13.0	12.0	18.0	17.0	19.0	18.5	20.5	19.5	18.0	16.0
11	10.5	9.5	14.0	13.0	18.5	18.0	19.0	18.0	19.5	18.5	18.0	16.5
12	11.5	10.5	15.0	14.0	18.5	18.5	19.5	18.5	20.5	18.5	17.0	16.5
13	12.0	11.0	16.0	15.0	18.5	18.0	20.5	19.5	20.5	19.5	17.0	16.0
14	12.0	11.5	18.0	16.0	18.5	18.0	21.5	20.0	20.5	19.0	16.5	15.5
15	11.5	11.0	19.0	17.0	18.0	18.0	21.5	20.5	20.0	19.0	15.5	14.5
16	11.5	10.5	20.0	18.5	18.0	17.0	23.0	20.5	19.0	17.0	15.5	14.5
17	10.5	9.5	20.5	19.5	17.0	16.5	23.0	21.0	17.0	16.0	15.0	14.5
18	9.5	8.5	20.5	20.0	16.5	16.0	23.0	21.0	17.0	15.5	14.5	14.5
19	8.5	8.0	20.0	19.0	16.5	15.5	22.0	21.0	18.0	15.5	14.5	14.5
20	8.5	8.0	19.0	18.5	18.0	16.0	21.0	20.0	18.0	16.0	14.5	14.5
21	9.0	8.0	18.5	17.0	20.0	18.0	20.0	19.0	18.0	16.0	14.5	14.5
22	10.5	8.0	18.5	17.0	20.5	19.0	19.5	18.5	16.5	15.5	14.5	14.5
23	10.5	10.5	17.0	16.5	20.5	20.0	18.5	17.0	16.5	15.5	14.5	14.0
24	10.5	10.0	16.5	16.5	20.0	19.0	18.0	16.5	15.5	15.0	14.0	14.0
25	10.0	9.5	16.5	15.5	19.0	19.0	19.0	16.5	16.0	15.0	14.0	13.5
26	10.5	10.0	15.5	14.5	19.0	17.0	19.5	18.0	16.0	15.0	14.0	13.5
27	10.5	10.0	15.0	14.5	17.0	16.0	21.0	19.0	16.0	15.0	14.5	14.0
28	10.5	10.5	15.5	14.0	17.0	16.5	22.0	20.0	15.5	15.0	14.5	14.0
29	11.0	10.5	16.0	14.5	17.0	16.5	22.0	20.5	15.5	15.0	15.0	14.5
30	11.5	10.5	17.0	15.5	16.5	16.0	21.5	20.0	15.5	15.0	15.0	15.0
31	---	---	18.0	16.5	---	---	22.0	20.5	15.0	14.0	---	---
MONTH	12.0	7.0	20.5	11.0	20.5	15.5	23.0	15.5	22.0	14.0	18.0	13.5

12029050 SCOTT LAKE NEAR MAYTOWN, WASH.

LOCATION.--Lat 46°55'12", long 122°56'07", in NE¼NE¼ sec.33, T.17 N., R.2 W., Thurston County, 1.7 mi (2.7 km) north of Maytown.

DRAINAGE AREA.--2.52 mi² (6.53 km²).

PERIOD OF RECORD.--Chemical analyses: February 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for the southern most point of lake. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, FEBRUARY 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB.											
21...	1005	3.0	6.2	19	250	10	8.5	2.6	4.7	.8	32
21...	1015	13	6.0	19	250	10	--	--	--	--	30
APR.											
25...	0925	3.0	12.2	15	180	20	--	--	--	--	33
25...	0935	12	11.8	16	240	20	--	--	--	--	32
JUNE											
29...	1010	3.0	18.3	16	100	0	--	--	--	--	38
29...	1015	12	15.8	18	190	10	--	--	--	--	40
SEP.											
17...	1145	3.0	17.6	12	130	10	11	3.0	5.6	1.6	44
17...	1150	12	15.8	15	540	40	--	--	--	--	46

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
FEB.											
21...	0	26	14	4.8	.22	.00	.17	.31	.48	.02	.00
21...	--	25	--	--	.22	.00	.21	.16	.37	.02	.00
APR.											
25...	--	27	--	--	.01	.00	.18	.22	.40	.02	.00
25...	--	26	--	--	.04	.00	.22	.20	.42	.01	.00
JUNE											
29...	--	31	--	--	.02	.00	.21	.16	.37	.03	.00
29...	--	33	--	--	.02	.00	.15	.10	.25	.04	.00
SEP.											
17...	--	36	14	3.8	.01	.00	.07	.31	.38	.02	.00
17...	--	38	--	--	.04	00	.11	.37	.48	.04	.00

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	CARBON DIOXIDE (CO2) (MG/L)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
FEB.											
21...	70	.10	0	32	6	81	7.1	30	4.1	19	7.0
21...	--	--	--	--	--	81	--	30	--	--	--
APR.											
25...	--	--	--	--	--	90	--	55	--	5.8	5.5
25...	--	--	--	--	--	92	--	45	--	--	--
JUNE											
29...	--	--	--	--	--	94	--	5	--	3.9	4.5
29...	--	--	--	--	--	96	--	10	--	--	--
SEP.											
17...	73	.10	0	40	4	104	--	10	--	3.7	3.5
17...	--	--	--	--	--	108	--	10	--	--	--

12031000 CHEHALIS RIVER AT PORTER, WASH.

LOCATION.--Lat 46°56'17", long 123°18'45", on north line of NE¼ sec.28, T.17 N., R.5 W., Grays Harbor County, at gaging station at bridge on County Highway at mouth of Porter Creek, 0.1 mi (0.2 km) west of Porter.

DRAINAGE AREA.--1,294 mi^2 (3,351 km^2).

PERIOD OF RECORD.--Chemical analyses: July 1959 to September 1973 (discontinued).
Water temperatures: July 1959 to September 1960, October 1961 to July 1972.
Sediment records: October 1961 to September 1971.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance, and coliform data furnished by the Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)
OCT.							
03...	0855	84	7.3	12.6	42	3	8.6
16...	0920	79	7.4	10.2	34	4	10.5
30...	0925	94	7.5	6.2	42	4	11.3
NOV.							
13...	0950	180	7.3	7.2	66	10	11.2
27...	0920	130	7.6	5.8	10	8	11.6
DEC.							
19...	0915	42	7.0	6.4	84	15	12.0
26...	0945	60	7.6	7.6	102	35	12.0
JAN.							
08...	0850	66	7.0	.6	39	8	13.5
22...	0920	61	7.0	4.5	43	12	12.9
FEB.							
05...	0945	72	7.0	4.4	35	7	12.0
20...	0915	75	7.1	5.4	34	7	12.3
MAR.							
05...	0930	69	7.1	7.7	50	9	11.9
19...	0900	65	7.3	6.2	53	15	11.8
APR.							
02...	0850	77	7.2	7.7	37	6	12.3
16...	1000	87	7.3	11.5	36	3	10.9
MAY							
07...	0900	50	7.3	8.2	54	2	11.5
14...	0940	79	7.4	16.6	46	6	9.9
JUNE							
05...	0950	97	7.5	16.7	64	2	9.4
18...	1045	93	7.5	15.5	45	5	9.9
JULY							
10...	1045	100	7.6	18.7	30	2	8.7
23...	0905	140	7.6	17.5	15	2	8.6
AUG.							
13...	0820	114	7.6	19.6	24	1	8.4
27...	0830	112	7.6	15.4	25	3	8.8
SEP.							
10...	0825	112	7.4	17.5	21	1	8.7
24...	0815	110	7.4	14.6	27	3	9.0

120310 CHEHALIS RIVER AT PORTER, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	IMMEDIATE COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
OCT.						
03...	400	0	3	4	.2	20
16...	400	0	6	6	1.7	10
30...	600	0	14	5	.2	10
NOV.						
13...	700	0	10	4	.2	30
27...	1600	0	17	2	.3	90
DEC.						
19...	8000	0	10	10	2.3	30
26...	7500	0	10	4	.0	20
JAN.						
08...	600	0	6	3	.3	20
22...	1200	0	14	4	.3	10
FEB.						
05...	400	0	7	5	.1	30
20...	400	10	6	4	.0	10
MAR.						
05...	270	10	5	6	.0	20
19...	400	0	5	5	.0	20
APR.						
02...	400	0	33	2	.2	40
16...	250	0	5	4	.2	10
MAY						
07...	150	0	11	4	.0	20
14...	600	0	10	4	.2	20
JUNE						
05...	600	0	9	2	.2	10
18...	1400	0	7	4	.2	10
JULY						
10...	350	0	10	2	.1	--
23...	200	0	6	2	.3	0
AUG.						
13...	110	0	8	0	.0	0
27...	1000	0	4	1	.0	10
SEP.						
10...	<1000	0	5	2	.0	20
24...	1600	0	3	4	.0	50

12032500 CLOQUALLUM RIVER AT ELMA, WASH.

LOCATION.--Lat 47°00'17", long 123°23'11", in SW¼NW¼ sec.36, T.18 N., R.6 W., Grays Harbor County, at former gaging station at State Highway 12 bridge, 1.7 mi (2.7 km) east of Elma, 1.9 mi (3.1 km) downstream from Wildcat Creek and at mile 1.9 (3.1 km).

DRAINAGE AREA.--64.9 mi^2 (168.1 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1961 to September 1965, October 1971 to September 1972.
Water temperatures: May 1972 to March 1973 (discontinued).

EXTREMES.--October 1972 to March 1973:
Water temperatures: Maximum 13.5°C Oct. 2; minimum, freezing point Dec. 8, 10.

Period of record:
Water temperatures: Maximum, 19.5°C Aug. 7, 8, 1972; minimum, freezing point Dec. 8, 10, 1972.

TEMPERATURE (°C) OF WATER, OCTOBER 1972 TO MARCH 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.0	11.0	8.0	6.5	8.5	7.0	6.5	6.0	6.0	5.0	8.0	7.0
2	13.5	11.5	9.0	8.0	8.0	6.0	6.0	5.5	6.0	5.0	8.5	6.5
3	13.0	11.5	10.0	9.0	6.0	4.5	5.5	4.0	6.0	4.5	8.0	6.5
4	11.5	9.5	10.0	9.5	4.5	3.5	4.5	3.5	5.0	4.0	8.5	6.5
5	11.0	8.5	9.5	9.0	3.5	2.0	4.0	3.0	4.5	3.0	8.5	7.0
6	10.5	8.5	9.5	9.0	2.0	1.0	3.0	2.0	5.0	3.5	9.0	6.5
7	11.0	9.0	10.0	9.0	1.0	0.5	3.0	1.5	5.0	3.5	9.0	8.0
8	11.5	9.5	9.0	8.5	0.5	0.0	1.5	1.0	5.0	3.5	8.5	7.0
9	11.5	10.5	9.5	9.0	1.5	0.5	2.0	1.0	5.5	4.5	8.5	7.0
10	10.5	8.5	9.5	8.5	0.5	0.0	3.5	2.0	5.5	4.5	---	---
11	10.0	8.5	8.5	7.0	1.5	0.5	4.0	3.0	6.5	5.0	---	---
12	10.5	8.5	8.0	7.0	1.5	1.0	4.5	4.0	6.5	5.5	---	---
13	10.5	8.5	8.5	7.0	2.0	1.0	6.0	4.5	6.5	5.5	---	---
14	11.0	9.5	8.0	6.5	3.0	2.0	6.5	6.0	6.0	5.5	---	---
15	10.0	8.0	7.0	6.0	3.5	3.0	6.5	6.0	7.0	6.0	---	---
16	10.0	8.0	6.5	5.5	3.5	3.0	6.5	6.0	8.0	6.5	---	---
17	10.0	8.5	6.0	5.5	4.0	3.0	6.5	6.0	8.0	6.0	---	---
18	10.0	9.5	7.0	6.0	5.5	4.0	6.5	6.0	7.0	5.5	---	---
19	10.5	9.5	8.0	6.5	6.5	5.5	6.0	5.0	6.5	5.0	---	---
20	10.0	9.5	7.0	6.0	7.0	6.5	5.5	5.5	6.5	4.5	---	---
21	10.5	10.0	7.0	6.0	8.0	7.0	5.5	5.0	7.0	4.5	---	---
22	11.0	10.0	7.0	6.5	8.0	7.0	5.5	5.0	7.0	4.5	---	---
23	11.0	9.5	8.0	6.5	8.0	7.0	5.5	5.0	7.0	5.0	---	---
24	9.5	8.5	7.0	6.5	7.0	7.0	6.0	5.5	7.0	5.5	---	---
25	9.0	8.5	8.0	7.0	7.0	7.0	5.5	4.5	8.0	6.5	---	---
26	9.0	8.0	7.0	6.5	8.0	7.0	4.5	3.5	8.0	7.0	---	---
27	8.0	7.0	6.5	6.0	7.0	6.5	5.0	4.0	8.5	7.0	---	---
28	8.0	7.0	6.5	6.0	7.0	6.0	5.5	5.0	8.5	7.0	---	---
29	8.0	6.5	7.0	6.5	6.0	5.5	5.5	5.5	---	---	---	---
30	6.5	5.0	8.0	7.0	6.5	6.0	6.0	5.5	---	---	---	---
31	6.5	5.5	---	---	6.0	6.0	6.0	5.0	---	---	---	---
MONTH	13.5	5.0	10.0	5.5	8.5	0.0	6.5	1.0	8.5	3.0	---	---

12034500 MIDDLE FORK SATSOP RIVER NEAR SATSOP, WASH.

LOCATION.--Lat 47°06'42", long 123°30'15", in NW¼NW¼ sec.25, T.19 N., R.7 W., Grays Harbor County, 0.2 mi (0.3 km) downstream from Smith Creek, 3.3 mi (5.3 km) upstream from former gaging station, 7.5 mi (12.1 km) north of Satsop, and at mile 3.7 (6.0 km).

DRAINAGE AREA.--56.7 mi^2 (146.9 km^2).

PERIOD OF RECORD.--Water temperatures: June 1972 to April 1973 (discontinued).

EXTREMES.--October 1972 to April 1973:
Water temperatures: Maximum, 13.0°C Oct. 2, Apr. 10, 11, 12; minimum, freezing point Dec. 7-10.

Period of record:
Water temperatures: Maximum, 22.0°C Aug. 7, 1972; minimum, freezing point Dec. 7-10, 1972.

REMARKS.--Temperature recorder not operating Dec. 27, Jan. 4-12, Jan. 31 to Feb. 19; range in temperature for period Jan. 31 to Feb. 19, 3.0°C to 7.0°C.

TEMPERATURE (°C) OF WATER, OCTOBER 1972 TO APRIL 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.0	10.5	6.5	5.5	8.0	6.5	5.0	4.5	---	---	6.5	6.0
2	13.0	11.0	8.5	6.5	7.0	5.5	4.5	4.0	---	---	6.5	5.5
3	12.0	11.0	9.0	8.5	5.5	4.0	5.0	4.5	---	---	6.5	6.0
4	12.0	9.5	9.0	8.5	4.0	3.0	---	---	---	---	7.0	6.0
5	11.0	8.5	8.5	8.0	3.0	1.5	---	---	---	---	7.0	6.0
6	11.0	8.0	8.0	8.0	1.5	0.5	---	---	---	---	8.0	6.0
7	11.0	8.5	8.5	8.0	0.5	0.0	---	---	---	---	8.0	6.5
8	11.5	9.0	8.0	7.0	0.0	0.0	---	---	---	---	8.0	6.0
9	11.0	10.0	8.0	7.0	0.5	0.0	---	---	---	---	8.0	6.5
10	10.0	8.5	8.0	7.0	0.5	0.0	---	---	---	---	7.0	6.5
11	10.5	8.5	7.0	6.0	1.0	0.5	---	---	---	---	7.0	5.5
12	10.5	8.0	7.0	6.0	1.5	1.0	---	---	---	---	6.5	6.0
13	9.5	8.0	7.0	6.5	1.5	1.0	6.0	5.0	---	---	7.0	5.0
14	10.5	8.5	7.0	6.0	3.0	1.5	6.0	6.0	---	---	6.0	5.0
15	10.0	8.0	6.0	5.5	3.0	2.0	6.5	6.0	---	---	7.0	5.5
16	10.0	7.0	6.0	5.0	3.5	2.0	6.5	6.0	---	---	7.0	6.5
17	10.0	7.0	5.5	5.0	5.0	3.5	6.5	6.0	---	---	6.5	5.5
18	10.0	8.5	6.5	5.5	5.5	4.5	7.0	6.0	---	---	6.0	5.0
19	9.5	9.0	7.0	6.0	5.0	5.0	7.0	5.5	---	---	6.0	5.0
20	9.0	8.5	6.5	5.5	5.5	5.0	6.0	5.0	5.5	4.0	7.0	5.5
21	10.0	9.0	7.0	5.5	5.5	5.5	5.5	5.0	6.5	4.5	8.0	5.0
22	10.5	9.5	7.0	6.5	5.5	5.5	5.5	5.0	6.5	4.5	8.0	5.5
23	10.0	9.0	7.0	6.0	6.0	5.5	5.5	5.0	7.0	5.0	8.5	5.5
24	9.5	7.0	6.0	5.5	6.5	6.0	6.0	5.0	6.5	5.5	8.5	5.5
25	8.5	8.0	6.5	5.5	6.5	6.0	5.0	4.0	6.5	6.0	9.5	6.5
26	8.5	6.5	6.5	5.5	6.5	6.5	4.5	3.5	6.5	6.5	8.0	6.0
27	7.0	6.0	5.5	5.5	---	---	5.0	4.0	6.5	6.0	7.0	6.0
28	7.0	5.5	6.0	5.5	6.0	5.5	5.5	4.5	6.5	6.0	8.5	5.5
29	7.0	5.5	6.5	6.0	5.5	5.0	5.5	5.0	---	---	6.5	6.0
30	6.5	4.5	6.5	6.0	5.0	4.5	5.5	4.5	---	---	7.0	6.0
31	6.0	5.0	---	---	5.0	4.5	---	---	---	---	8.0	6.0
MONTH	13.0	4.5	9.0	5.0	8.0	0.0	---	---	---	---	9.5	5.0

	APRIL		APRIL			APRIL		
DAY	MAX	MIN	DAY	MAX	MIN	DAY	MAX	MIN
1	9.0	5.5	11	13.0	9.0	21	10.5	8.0
2	9.5	6.0	12	13.0	9.0	22	11.0	9.0
3	10.0	6.0	13	10.5	9.5	23	--	8.0
4	10.5	7.0	14	11.0	9.0	24	--	--
5	10.5	8.5	15	10.0	8.5	25	--	--
6	10.5	6.5	16	10.0	8.5	26	--	--
7	10.5	6.0	17	10.0	8.0	27	--	--
8	10.0	6.5	18	8.5	7.0	28	--	--
9	12.0	8.0	19	10.0	6.0	29	--	--
10	13.0	9.0	20	10.5	7.0	30	--	--
						31	--	--

12036800 WYNOOCHEE RIVER BELOW HELM CREEK NEAR MONTESANO, WASH.

LOCATION.--Lat 47°04'44", long 123°41'57", in NE¼NE¼ sec.5, T.18 N., R.8 W., Grays Harbor County, at logging road crossing, 1.1 mi (1.8 km) downstream from Helm Creek, 9 mi (14.5 km) northwest of Montesano and at mile 13.7 (22.0 km).

DRAINAGE AREA.--133 mi^2 (344 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 .

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)	ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)
NOV.								
29...	1505	.20	.00	.15	.18	.33	.01	.00
JAN.								
16...	1615	.19	.01	.21	.04	.25	.09	.00
MAR.								
13...	1630	.14	.00	.09	.16	.25	.01	.00
MAY								
30...	1600	.10	.00	.04	.03	.07	.00	.00
JULY								
17...	1600	.06	.00	.01	.08	.09	.00	.00
SEP.								
25...	1710	.13	.00	.02	.09	.11	.00	.00

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)
NOV.							
29...	54	7.2	6.6	3	--	12.4	100
JAN.							
16...	47	6.8	5.8	49	50	12.3	240
MAR.							
13...	54	7.4	8.5	20	4	12.3	29
MAY							
30...	64	7.1	16.8	23	1	10.0	76
JULY							
17...	70	7.6	21.5	8	1	9.0	40
SEP.							
25...	74	7.5	14.2	10	1	10.5	310

12037400 WYNOOCHEE RIVER ABOVE BLACK CREEK NEAR MONTESANO, WASH.

LOCATION.--Lat 47°00'42", long 123°39'35", in SE¼SE¼ sec.27, T.18 N., R.8 W., Grays Harbor County, temperature recorder at gaging station on left bank, 2,000 ft (610 m) upstream from Black Creek and 3.5 mi (5.6 km) northwest of Montesano, and at mile 5.9 (9.5 km).

DRAINAGE AREA.--155 mi^2 (401 km^2).

PERIOD OF RECORD.--Water temperature: October 1969 to September 1973.

EXTREMES.--1972-73:
Water temperatures: Maximum, 20.0°C July 14, 17, 27, 28; minimum, 1.0°C Jan. 9, 10.

Period of record:
Water temperatures: Maximum, 24.0°C Aug. 10, 1971; minimum, 1.0°C Jan. 9, 10, 1973.

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.5	11.5	8.0	7.0	8.0	7.0	5.0	5.0	5.0	5.0	7.0	6.5
2	12.0	11.5	9.0	8.0	8.0	6.5	5.0	5.0	5.0	5.0	7.0	6.5
3	12.0	11.5	9.0	8.5	6.5	5.5	5.0	4.5	5.0	5.0	6.5	6.5
4	11.5	10.5	9.0	9.0	5.5	5.0	4.5	4.0	5.0	4.5	7.0	6.5
5	11.0	9.5	9.0	8.5	5.0	3.5	4.5	4.0	4.5	4.0	7.0	6.5
6	11.0	9.5	8.5	8.0	3.5	3.0	4.0	3.5	4.0	4.0	7.0	6.5
7	11.5	10.0	8.5	8.0	3.0	3.0	3.5	2.0	4.0	4.0	7.0	7.0
8	11.5	10.5	8.5	8.0	3.0	1.5	2.0	1.5	4.5	4.0	8.0	7.0
9	11.5	10.5	8.0	8.0	3.0	2.0	1.5	1.0	5.0	4.5	8.0	8.0
10	10.5	9.5	8.5	8.0	3.0	2.0	2.0	1.0	5.0	4.5	8.0	8.0
11	10.0	9.0	8.5	7.0	3.0	3.0	3.5	2.0	5.0	4.5	8.0	7.0
12	10.5	9.0	8.0	7.0	3.0	2.0	4.5	3.5	5.0	5.0	8.0	7.0
13	10.0	9.0	8.0	8.0	3.0	3.0	5.0	4.5	5.5	5.0	8.0	6.5
14	10.5	9.5	8.0	8.0	3.5	3.0	5.0	5.0	5.5	5.0	8.0	6.5
15	10.0	9.0	8.0	7.0	3.5	3.5	5.0	5.0	5.5	5.0	8.0	6.5
16	10.0	9.0	7.0	7.0	3.5	3.5	5.0	5.0	5.5	5.5	8.0	7.0
17	10.0	9.0	7.0	6.5	4.0	3.5	5.0	5.0	6.0	5.5	7.0	6.5
18	10.0	9.5	7.0	6.5	5.0	4.0	5.0	5.0	6.0	6.0	7.0	6.5
19	10.0	10.0	8.0	7.0	5.5	5.0	5.0	5.0	6.0	5.5	6.5	6.5
20	10.0	9.5	8.0	7.0	5.5	5.0	5.0	5.0	5.5	5.0	8.0	6.5
21	10.0	9.5	7.0	7.0	5.5	5.5	5.0	4.5	6.0	5.0	8.0	6.5
22	10.0	10.0	7.0	7.0	5.5	5.5	5.0	5.0	6.0	5.5	8.0	7.0
23	10.0	9.5	8.0	7.0	5.5	5.5	5.0	5.0	6.0	6.0	8.5	7.0
24	10.0	9.0	8.0	7.0	5.5	5.5	5.0	5.0	6.0	6.0	9.0	8.0
25	9.5	9.0	7.0	7.0	6.0	5.5	5.0	5.0	6.5	6.0	9.0	8.5
26	9.5	9.0	7.0	7.0	6.0	6.0	5.0	4.0	6.5	6.5	9.0	8.0
27	9.0	8.5	7.0	6.5	6.0	5.5	4.0	4.0	6.5	6.5	9.0	8.0
28	8.5	8.0	7.0	6.5	5.5	5.5	4.5	4.0	6.5	6.5	9.0	8.0
29	8.5	8.0	7.0	7.0	5.5	5.5	5.0	4.5	---	---	8.5	8.0
30	8.0	7.0	7.0	7.0	5.5	5.5	5.0	5.0	---	---	8.0	8.0
31	7.0	7.0	---	---	5.5	5.0	5.0	5.0	---	---	8.0	8.0
MONTH	12.0	7.0	9.0	6.5	8.0	1.5	5.0	1.0	6.5	4.0	9.0	6.5

12037400 WYNOOCHEE RIVER ABOVE BLACK CREEK NEAR MONTESANO, WASH.--Continued

TEMPERATURE (DEG. C) OF WATER , WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.5	7.0	13.5	11.0	14.5	12.0	14.5	13.0	18.0	16.0	15.0	13.0
2	8.5	7.0	13.0	11.0	14.5	13.0	16.0	13.0	18.0	15.5	15.0	13.0
3	9.0	7.0	12.0	11.0	15.0	13.0	16.5	14.0	18.0	16.0	15.5	13.5
4	9.5	8.5	13.5	11.0	16.5	14.0	16.5	15.0	17.0	16.0	16.5	13.5
5	9.5	9.0	12.0	11.0	16.5	14.5	15.0	14.0	16.0	15.5	16.5	14.5
6	9.5	7.0	11.5	11.0	16.0	14.0	14.5	13.5	17.0	15.5	15.5	14.5
7	9.5	7.0	11.0	11.0	14.0	14.0	14.5	13.5	16.5	15.5	14.5	13.5
8	9.5	8.5	11.0	10.0	14.5	14.0	14.5	13.5	18.0	15.5	15.5	13.5
9	10.5	9.5	11.5	10.5	15.0	13.0	16.5	14.0	17.0	15.5	15.5	13.5
10	11.0	9.5	12.0	10.5	15.5	13.0	16.5	14.5	15.5	14.5	16.5	14.5
11	11.5	9.5	13.5	10.5	15.0	14.0	17.0	14.0	17.0	14.5	16.5	14.5
12	11.5	10.0	14.5	11.5	14.5	14.0	18.0	14.5	18.5	15.0	15.5	13.5
13	12.0	10.5	15.5	13.0	14.5	13.0	19.0	16.0	18.0	15.5	15.0	13.5
14	11.5	9.5	15.5	14.5	13.5	13.0	20.0	16.5	15.5	14.5	14.5	14.0
15	9.5	9.5	15.5	14.0	13.5	12.0	19.5	17.0	15.0	14.5	14.5	13.0
16	10.0	9.5	16.0	13.5	13.0	12.0	19.5	16.5	15.0	14.5	14.0	13.0
17	10.5	9.5	16.0	14.5	12.0	11.0	20.0	17.0	15.5	13.5	14.0	13.5
18	10.5	9.0	15.5	14.5	12.0	11.5	19.5	17.0	15.5	13.5	14.0	13.5
19	9.0	8.0	14.5	12.0	14.5	12.0	18.5	16.0	15.5	13.5	14.0	13.5
20	10.5	8.5	13.5	11.5	16.0	13.5	16.0	15.5	16.0	14.0	13.5	13.5
21	10.5	10.0	14.5	11.5	17.0	14.5	16.5	14.5	16.5	14.5	13.5	13.5
22	10.5	10.0	14.0	13.0	17.0	15.0	16.0	14.5	16.0	14.0	13.5	13.0
23	10.5	10.0	13.5	13.0	16.5	14.5	15.5	14.0	14.5	13.5	13.5	13.0
24	10.0	10.0	13.0	12.0	14.5	13.5	15.5	14.0	14.0	13.0	13.5	13.0
25	11.5	9.5	12.0	11.0	14.0	13.5	18.0	14.5	15.5	13.0	13.5	12.0
26	11.0	10.5	12.0	10.5	14.0	13.5	19.5	15.5	15.5	14.0	13.5	13.0
27	11.0	10.0	11.5	11.0	15.5	13.5	20.0	16.5	15.0	13.5	13.5	12.0
28	10.5	9.0	14.0	10.5	16.0	13.5	20.0	17.0	14.5	14.0	13.5	13.0
29	11.0	9.5	15.5	12.0	15.0	14.0	19.0	16.5	15.0	14.0	13.5	13.0
30	13.0	10.0	15.5	13.5	14.5	13.5	18.5	16.5	15.0	13.5	13.0	12.0
31	---	---	15.0	13.5	---	---	17.0	16.5	14.5	13.0	---	---
MONTH	13.0	7.0	16.0	10.0	17.0	11.0	20.0	13.0	18.5	13.0	16.5	12.0

12038005 WISHKAH RIVER ABOVE EAST FORK NEAR ABERDEEN, WASH.

LOCATION.--Lat 47°04'20", long 123°46'09", in NE¼SW¼ sec.2, T.18 N., R.9 W., Grays Harbor County, at Wishkah Road crossing, 0.1 mi (0.2 km) upstream from East Fork, 7.5 mi (12.1 km) north of Aberdeen and at mile 12.3 (19.8 km).

DRAINAGE AREA.--59.9 mi^2 (155.1 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1962 to September 1970, October 1972 to September 1973. Record prior to October 1972 published as 12038100, "near Wishkah."

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)
NOV. 29...	1630	.31	.00	.03	.03	.06	.01	.01	51	7.2
JAN. 16...	1600	.31	.01	.06	.05	.11	.05	.00	41	6.9
MAR. 13...	1600	.25	.00	.06	.03	.09	.01	.00	54	7.3
MAY 30...	1520	.15	.00	.03	.16	.19	.01	.00	62	7.3
JULY 17...	1530	.06	.00	.03	.11	.14	.01	.00	86	7.7
SEP. 25...	1650	.31	.00	.05	.23	.28	.02	.00	78	7.4

DATE	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
NOV. 29...	6.7	4	0	12.0	220	0	11	3	.2	10
JAN. 16...	7.2	38	60	11.6	400	0	4	5	.2	50
MAR. 13...	8.6	27	3	12.2	100	0	5	8	.1	20
MAY 30...	15.1	18	1	10.0	175	0	2	0	.1	40
JULY 17...	18.5	21	1	9.4	120	0	1	2	.1	0
SEP. 25...	13.6	50	2	10.5	770	0	1	3	.1	20

12038510 WEST FORK HOQUIAM RIVER BELOW POLSON CREEK NEAR HOQUIAM, WASH.

LOCATION.--Lat 47°03'24", long 123°55'35", in NW¼SE¼ sec.9, T.18 N., R.10 W., Grays Harbor County, at DeKay Road crossing, 300 ft (91 m) downstream from Polson Creek and 4.6 mi (7.4 km) northwest of Hoquiam.

DRAINAGE AREA.--18.0 mi^2 (46.6 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)	ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)
NOV. 29...	1540	.13	.00	.07	.20	.27	.01	.01
JAN. 16...	1430	.19	.00	.05	.06	.11	.02	.00
MAR. 13...	1525	.14	.00	.05	.10	.15	.01	.01
MAY 30...	1420	.08	.00	.04	.04	.08	.01	.00
JULY 17...	1440	.09	.00	.02	.06	.08	.01	.00
SEP. 25...	1600	.16	.02	.22	.12	.34	.14	.00

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)
NOV. 29...	58	7.3	6.6	3	0	11.9	350
JAN. 16...	44	6.8	7.8	27	4	11.4	320
MAR. 13...	54	7.4	8.3	28	2	12.0	400
MAY 30...	67	7.2	13.5	14	2	10.6	325
JULY 17...	76	7.6	14.4	21	2	9.6	>400
SEP. 25...	72	7.1	13.0	141	63	9.8	2100

12039003 HUMPTULIPS RIVER AT HUMPTULIPS, WASH.

LOCATION.--Lat 47°13'48", long 123°57'38", in SE¼SE¼ sec.7, T.20 N., R.10 W., Grays Harbor County, at U.S. Highway 101 bridge at Humptulips, 1.2 mi (1.9 km) downstream from gaging station and at mile 23.6 (38.0 km).

DRAINAGE AREA.--About 132 mi^2 (342 km^2).

PERIOD OF RECORD.--Chemical analyses: July 1959 to September 1961, November 1961 to September 1970 (partial-record station), October 1971 to September 1973.
Water temperature: November 1969 to October 1970.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance, and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)
NOV.								
29...	1500	824	5.9	1.4	3.0	.4	27	22
JAN.								
16...	1400	5590	4.0	1.0	2.3	.4	18	15
MAR.								
13...	1455	1510	4.8	1.1	4.7	.8	22	18
MAY								
30...	140[illegible]	649	5.9	1.2	2.6	.2	28	23
JULY								
17...	1410	286	6.7	1.6	3.3	.4	38	31
SEP.								
25...	1545	544	6.3	1.3	3.1	.3	28	23

DATE	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
NOV.									
29...	3.4	2.9	.18	.00	.09	.01	.01	20	0
JAN.									
16...	3.1	2.5	.17	.02	.27	.15	.00	14	0
MAR.									
13...	5.0	2.2	.11	.00	.11	.00	.00	17	0
MAY									
30...	2.9	1.9	.10	.00	.03	.00	.00	20	0
JULY									
17...	3.3	2.3	.04	--	.02	.00	.00	23	0
SEP.									
25...	2.9	2.6	.16	--	.02	.00	.00	21	0

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
NOV.								
29...	53	7.2	6.5	4	0	12.7	2.7	60
JAN.								
16...	45	6.8	6.7	34	65	12.0	4.6	250
MAR.								
13...	55	7.4	7.0	21	4	12.4	1.4	43
MAY								
30...	62	7.2	14.5	14	1	10.5	2.8	150
JULY								
17...	65	7.5	18.4	7	1	9.0	1.9	100
SEP.								
25...	64	7.4	14.2	16	1	10.8	1.8	190

12039300 NORTH FORK QUINAULT RIVER NEAR AMANDA PARK, WASH.

LOCATION.--Lat 47°35'46", long 123°37'23", in SW¼ sec.6, T.24 N., R.7 W., Jefferson County, Olympic National Park, on right bank at gaging station, 15.5 mi (24.9 km) northeast of Amanda Park, and at mile 5.2 (8.4 km).

DRAINAGE AREA.--74.1 mi^2 (191.9 km^2).

PERIOD OF RECORD.--Chemical analyses: September 1965 to September 1973.
Water temperatures: March 1965 to September 1973.
Sediment records: April 1965 to September 1972 (partial-record station).

EXTREMES.--1972-73.
Water temperatures: Maximum, 13.0°C Aug. 7, 8, 12, 13; minimum, 1.5°C Dec. 7-10.

Period of record:
Water temperatures: Maximum, 14.5°C Aug. 7, 16-18, 1965; minimum, 1.0°C Jan. 31, 1968, sometime during period Dec. 16, 1970 to Jan. 20, 1971, Mar. 1, 2, 1971.

REMARKS.--Temperature recorder not inking properly May 11, 14.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
NOV.											
21...	1012	324	5.2	15	.7	1.8	.3	40	0	33	11
JAN.											
17...	1210	1450	4.6	10	.4	15	.1	54	8	58	8.0
MAR.											
15...	1115	400	4.9	14	.6	1.6	.2	42	0	34	10
MAY											
16...	1110	1120	3.2	8.2	.4	.9	.0	22	0	18	6.7
JULY											
17...	1030	574	3.8	10	.4	1.1	.1	32	0	26	8.0
SEP.											
18...	1100	219	5.2	17	.7	1.7	1.3	49	0	40	12

DATE	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)
NOV.											
21...	1.4	.1	.01	64	55	40	8	90	6.2	4.8	3
JAN.											
17...	1.0	.1	.02	72	74	27	0	115	6.8	3.8	3
MAR.											
15...	.7	.0	.00	63	53	37	3	85	7.4	4.2	1
MAY											
16...	1.4	.0	--	46	32	22	4	52	6.8	5.8	4
JULY											
17...	.7	.0	--	55	40	27	0	64	6.8	10.2	4
SEP.											
18...	.3	.0	.06	80	62	45	5	102	6.8	10.1	1

12039300 NORTH FORK QUINAULT RIVER NEAR AMANDA PARK, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED OXYGEN (MG/L)	BIO-CHEM-ICAL OXYGEN DEMAND (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
NOV.											
21...	12.5	.0	40	0	0	2	0	.0	10	2	1.7
JAN.											
17...	12.8	.1	18	2	--	--	--	--	--	7	27
MAR.											
15...	--	.3	2.7	--	--	--	--	--	--	1	1.1
MAY											
16...	12.4	.5	5.6	--	--	--	--	--	--	6	18
JULY											
17...	10.8	.8	8.1	4	--	--	--	--	--	3	4.6
SEP.											
18...	10.8	1.2	12	31	--	--	--	--	--	2	1.2

DATE	TIME	DIS-SOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUS-PENDED GROSS ALPHA AS U-NAT. (UG/L)	DIS-SOLVED GROSS BETA AS CS-137 (PC/L)	SUS-PENDED GROSS BETA AS CS-137 (PC/L)	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUS-PENDED GROSS BETA AS SR90 /Y90 (PC/L)	DIS-SOLVED RA-226 (RADON METHOD) (PC/L)	DIS-SOLVED URANIUM (U) (UG/L)
MAR..									
15...	1115	<.5	<.4	.9	<.4	.7	<.4	.01	.01

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.0	7.0	4.5	4.5	5.0	4.5	4.0	4.0	3.5	3.5	4.0	4.0
2	8.0	8.0	5.0	4.5	5.0	4.5	4.0	4.0	3.5	3.5	4.0	4.0
3	8.5	8.0	5.5	5.0	4.5	3.5	4.0	3.0	3.5	3.0	4.0	4.0
4	8.5	6.5	6.0	5.5	3.5	3.0	3.0	3.0	3.0	2.0	4.0	4.0
5	7.0	6.5	5.5	5.0	3.0	3.0	3.0	2.0	2.0	2.0	4.0	4.0
6	7.0	6.5	5.0	5.0	3.0	2.0	2.0	2.0	2.0	2.0	4.0	4.0
7	8.0	7.0	5.0	5.0	2.0	1.5	2.0	2.0	3.0	2.0	4.5	4.0
8	8.5	8.0	5.5	5.0	1.5	1.5	2.0	2.0	3.0	2.0	4.5	4.5
9	8.5	8.0	5.5	5.0	1.5	1.5	2.0	2.0	3.0	2.0	4.5	4.5
10	8.0	6.5	5.0	5.0	2.0	1.5	2.0	2.0	3.5	3.0	4.5	4.0
11	6.5	6.0	5.0	5.0	2.0	2.0	3.0	2.0	3.5	3.5	4.0	4.0
12	6.5	6.0	5.0	5.0	2.0	2.0	3.5	3.0	3.5	3.0	4.0	4.0
13	7.0	6.5	5.0	5.0	2.0	2.0	3.5	3.5	3.5	3.0	4.5	4.0
14	8.0	7.0	5.0	5.0	2.0	2.0	3.5	3.5	4.0	3.5	4.0	4.0
15	7.0	6.5	5.0	5.0	2.0	2.0	3.5	3.5	4.0	4.0	4.5	4.0
16	7.0	6.5	5.0	4.5	3.0	2.0	3.5	3.5	4.0	4.0	4.5	4.0
17	7.0	6.5	5.0	4.5	3.5	3.0	3.5	3.5	4.0	4.0	4.0	3.5
18	7.0	6.5	5.0	4.5	3.5	3.5	3.5	3.5	4.0	3.5	3.5	3.5
19	6.5	6.5	5.0	5.0	4.0	3.5	3.5	2.0	4.0	4.0	3.5	3.5
20	6.5	6.5	5.0	4.5	4.5	4.0	3.0	3.0	4.0	4.0	4.5	3.5
21	7.0	6.5	4.5	4.5	4.5	4.5	3.0	3.0	4.0	4.0	4.0	3.5
22	8.0	7.0	5.0	4.5	4.5	4.5	3.5	3.0	4.0	4.0	4.5	3.5
23	8.0	7.0	5.0	5.0	4.5	4.5	3.5	3.5	4.0	4.0	4.5	4.0
24	7.0	6.0	5.0	4.5	4.5	4.0	3.5	3.5	4.0	4.0	4.5	4.0
25	6.0	6.0	4.5	4.5	4.5	4.0	3.5	3.0	4.0	4.0	5.0	4.5
26	6.0	6.0	4.5	4.5	4.5	4.0	3.0	2.0	4.0	4.0	4.5	4.0
27	6.0	5.5	4.5	4.5	4.5	4.5	3.0	2.0	4.0	3.5	4.5	4.5
28	5.5	4.5	4.5	4.5	4.5	4.5	3.0	3.0	4.0	4.0	4.5	4.0
29	5.0	4.0	4.5	4.5	4.5	4.0	3.5	3.0	---	---	4.5	4.5
30	4.5	4.0	4.5	4.5	4.0	4.0	3.5	3.0	---	---	4.5	4.5
31	4.5	4.0	---	---	4.0	4.0	3.5	3.0	---	---	4.5	4.5
MONTH	8.5	4.0	6.0	4.5	5.0	1.5	4.0	2.0	4.0	2.0	5.0	3.5

12039300 NORTH FORK QUINAULT RIVER NEAR AMANDA PARK, WASH.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	5.0	4.0	6.0	5.5	6.5	6.0	8.0	7.0	12.0	11.5	10.5	9.0
2	5.0	4.5	6.0	5.5	6.5	5.5	8.5	8.0	12.0	11.0	10.5	10.0
3	5.0	4.5	6.0	5.5	8.0	5.5	9.5	8.0	12.0	11.5	11.0	10.0
4	5.5	4.5	6.0	5.0	8.0	6.5	9.5	8.5	12.0	11.5	12.0	10.0
5	5.0	4.5	6.0	5.0	8.5	6.5	8.5	8.0	12.0	11.5	12.0	10.0
6	5.0	4.0	6.0	5.5	8.0	6.0	8.0	8.0	12.0	11.0	12.0	11.0
7	4.5	3.5	6.0	5.0	6.0	6.0	8.0	8.0	13.0	11.5	11.5	10.0
8	4.5	4.0	5.0	4.0	6.5	6.0	8.0	8.0	13.0	11.0	11.0	10.0
9	5.5	4.5	5.0	4.0	6.5	5.5	9.5	8.0	12.0	12.0	12.0	10.0
10	5.5	4.5	6.0	5.0	6.5	5.5	9.5	8.5	12.0	11.5	12.0	11.0
11	5.5	4.5	---	5.0	7.0	6.0	9.0	8.0	12.0	11.0	12.0	11.5
12	5.5	4.5	7.0	5.5	7.0	6.0	10.0	8.5	13.0	11.0	12.0	11.0
13	5.5	4.5	7.0	5.0	6.5	6.0	10.5	9.0	13.0	12.0	11.0	10.5
14	5.0	4.5	---	5.5	6.5	6.0	11.0	9.0	12.0	12.0	11.0	11.0
15	5.5	5.0	6.5	5.5	6.0	6.0	11.0	9.5	12.0	11.0	11.0	10.0
16	5.5	5.0	6.5	5.5	6.0	6.0	11.0	9.5	11.5	11.0	10.5	10.0
17	5.0	4.5	7.0	5.5	6.5	6.0	11.5	10.0	11.0	10.0	10.5	10.0
18	4.5	4.0	6.5	5.5	6.5	6.0	11.5	10.0	10.5	9.0	10.0	10.0
19	5.0	4.0	6.5	5.5	8.0	6.5	11.5	10.5	11.0	9.5	10.0	10.0
20	5.5	4.5	5.5	5.0	9.0	7.0	11.5	10.0	11.0	10.0	10.0	10.0
21	5.5	5.0	6.5	5.0	10.0	8.0	10.0	10.0	11.0	10.0	10.0	10.0
22	5.5	5.0	6.5	6.0	10.0	8.0	10.0	9.0	11.0	9.5	10.0	10.0
23	5.5	5.0	6.0	5.5	9.0	8.0	9.5	9.0	11.0	10.0	10.0	10.0
24	6.0	5.0	5.5	5.5	8.0	8.0	9.5	9.0	11.0	10.0	10.5	10.0
25	6.0	5.0	5.5	5.0	9.0	8.0	11.0	9.5	11.0	10.0	10.0	10.0
26	6.0	5.5	5.5	5.0	8.5	8.0	12.0	10.0	11.5	10.0	11.0	10.0
27	6.0	5.0	5.5	5.5	10.0	8.0	12.0	11.0	11.0	10.5	11.0	10.0
28	5.0	4.0	7.0	5.5	10.5	8.0	12.0	11.0	11.0	10.0	10.5	9.5
29	5.0	4.5	8.0	6.0	8.5	8.0	12.0	11.5	12.0	10.0	10.5	10.5
30	6.0	5.0	8.0	6.0	8.5	7.0	12.0	11.0	11.0	10.0	10.5	9.5
31	---	---	7.0	5.5	---	---	12.0	11.0	11.0	10.0	---	---
MONTH	6.0	3.5	8.0	4.0	10.5	5.5	12.0	7.0	13.0	9.0	12.0	9.0

12039500 QUINAULT RIVER AT QUINAULT LAKE, WASH.

LOCATION.--Lat 47°27'28", long 123°53'17", in SW¼NE¼ sec.25, T.23 N., R.10 W., Grays Harbor County, at U.S. Highway 101 bridge and gaging station, 0.2 mi (0.3 km) downstream from Quinault Lake, 2.0 mi (3.2 km) southwest of Quinault, and at mile 33.4 (53.7 km).

DRAINAGE AREA.--264 mi^2 (684 km^2).

PERIOD OF RECORD.--Chemical analyses: July 1959 to June 1960, October 1962 to September 1970 (partial-record station), October 1971 to September 1973.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance, and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)
NOV.								
29...	1425	1780	8.4	.6	1.6	.2	25	21
JAN.								
16...	1330	14200	6.8	.5	1.4	.2	25	21
MAR.								
13...	1435	2380	7.6	.5	1.6	.2	24	20
MAY								
30...	1330	2640	8.2	.5	2.0	.2	31	25
JULY								
17...	1345	1460	9.0	.6	1.6	.3	32	26
SEP.								
25...	1515	1300	9.6	.5	1.6	.2	29	24

DATE	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
NOV.									
29...	5.4	1.9	.07	.00	.04	.01	.01	23	3
JAN.									
16...	4.4	1.8	.09	.00	.05	.03	.00	19	0
MAR.									
13...	5.1	1.3	.07	.00	.13	.01	.00	21	1
MAY									
30...	6.3	1.7	.03	.00	.04	.00	.00	23	0
JULY									
17...	6.1	1.3	.02	--	.01	.00	.00	25	0
SEP.									
25...	6.5	2.3	.05	--	.02	.00	.00	26	2

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
NOV.								
29...	58	7.3	8.0	4	0	11.3	2.0	450
JAN.								
16...	52	6.7	5.6	61	9	11.6	8.0	1000
MAR.								
13...	61	7.0	7.5	23	4	12.0	3.8	600
MAY								
30...	56	7.3	11.5	18	2	11.0	2.5	<100
JULY								
17...	71	7.6	19.5	6	1	9.8	1.3	120
SEP.								
25...	83	7.5	15.8	5	1	9.9	1.5	60

12039900 QUEETS RIVER ABOVE CLEARWATER RIVER NEAR QUEETS, WASH.

LOCATION.--Lat 47°32'58", long 124°16'35", in SW¼SW¼ sec.29, T.24 N., R.12 W., Jefferson County, at county road bridge, 0.9 mi (1.4 km) upstream from Clearwater River, 2.6 mi (4.2 km) east of Queets and at mile 6.9 (11.1 km)

DRAINAGE AREA.--285 mi² (738 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)
NOV.												
29...	1310	8.0	.8	2.4	.4	26	21	5.6	2.4	.09	.00	.02
JAN.												
16...	1300	4.2	.6	2.0	.9	16	13	3.7	2.4	.10	.02	.24
MAR.												
13...	1250	6.1	.6	2.4	1.0	19	16	7.9	2.9	.06	.00	.17
MAY												
30...	1150	8.4	.8	1.8	.3	27	22	6.9	1.9	.04	.00	.06
JULY												
17...	1210	9.1	.7	2.0	.3	32	26	7.2	1.5	.02	--	.01
SEP.												
25...	1420	8.4	.6	2.7	.3	27	22	6.2	2.6	.04	--	.04

DATE	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)
NOV.												
29...	.02	.01	23	2	68	7.5	6.4	0	2	12.6	1.3	80
JAN.												
16...	.15	.00	13	0	43	6.9	6.1	72	55	12.0	3.2	250
MAR.												
13...	.02	.00	18	2	64	7.0	6.9	54	5	12.6	3.0	100
MAY												
30...	.01	.00	24	2	65	7.0	12.1	21	6	11.0	4.3	200
JULY												
17...	.01	.00	26	0	65	7.7	16.5	9	5	10.0	1.0	450
SEP.												
25...	.01	.00	23	1	71	7.5	14.4	40	4	11.3	1.4	480

12040002 CLEARWATER RIVER NEAR QUEETS, WASH.

LOCATION.--Lat 47°34'45", long 124°18'00", in SW¼SW¼ sec.18, T.24 N., R.12 W., Jefferson County, at private road crossing, 3.1 mi (5.0 km) northeast of Queets and at mile 3.6 (5.8 km).

DRAINAGE AREA.--143 mi² (370 km²).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)
NOV.												
29...	1330	6.9	1.1	3.6	.5	23	19	8.0	3.3	.09	.00	.06
JAN.												
16...	1315	3.6	.7	2.6	1.0	16	13	4.6	3.2	.15	.03	.43
MAR.												
13...	1310	5.0	.8	3.0	1.4	17	14	8.1	3.1	.08	.00	.11
MAY												
30...	1205	7.0	1.0	3.0	.4	25	21	8.3	3.1	.05	.00	.05
JULY												
17...	1225	9.3	1.3	3.9	.6	35	29	10	3.0	.02	--	.02
SEP.												
25...	1440	9.0	1.2	4.1	.5	27	22	11	4.0	.04	--	.02

DATE	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)
NOV.												
29...	.01	.01	22	3	54	7.2	6.2	2	3	12.8	2.3	200
JAN.												
16...	.14	.00	12	0	43	6.9	6.8	73	80	12.0	3.2	400
MAR.												
13...	.01	.00	16	2	66	7.0	6.3	39	2	12.6	2.7	<100
MAY												
30...	.00	.00	22	1	64	7.2	13.0	20	2	10.5	2.5	66
JULY												
17...	.00	.00	29	0	94	7.6	19.4	15	1	8.5	1.4	<40
SEP.												
25...	.00	.00	27	5	82	7.5	13.6	44	1	11.0	1.4	220

12041200 HOH RIVER AT U.S. HIGHWAY 101, NEAR FORKS, WASH.

LOCATION.--Lat 47°48'25", long 124°14'59", in NE¼NE¼ sec.33, T.27 N., R.12 W., Jefferson County, at U.S. Highway 101 bridge, 250 ft (76 m) upstream from gaging station, 1.0 mi (1.6 km) downstream from Hell Roaring Creek, 11.5 mi (18.5 km) southeast of Forks, and at mile 15.4 (24.8 km).

DRAINAGE AREA.--253 mi^2 (655 km^2).

PERIOD OF RECORD.--Chemical analyses: July 1960 to September 1961, November 1961 to September 1970 (partial-record station), October 1971 to September 1973. Prior to November 1961, published as 12041000.
Water temperatures: November 1970 to April 1971.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)
NOV. 29...	1215	1130	12	1.0	2.4	.4	35	29
JAN. 16...	1200	11800	6.5	.7	1.9	.8	23	19
MAR. 13...	1135	2090	9.4	.8	2.3	.7	29	24
MAY 30...	1100	2160	13	.9	1.8	.3	34	28
JULY 17...	1120	1860	10	.6	1.5	.2	28	23
SEP. 25...	1230	1040	11	.8	1.6	.3	31	25

DATE	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
NOV. 29...	9.2	2.1	.10	.00	.10	.01	.01	34	5
JAN. 16...	5.9	2.0	.13	.01	.27	.18	.00	19	0
MAR. 13...	8.9	2.5	.07	.00	.10	.02	.00	27	3
MAY 30...	11	1.6	.07	.00	.06	.01	.00	36	8
JULY 17...	8.4	.9	.01	--	.05	.01	.00	27	4
SEP. 25...	9.7	2.4	.06	--	.02	.00	.00	31	5

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
NOV. 29...	56	7.4	6.2	2	1	12.9	2.2	150
JAN. 16...	55	7.0	5.7	64	60	12.3	3.7	130
MAR. 13...	83	7.2	6.7	34	4	12.5	2.9	40
MAY 30...	84	--	12.8	--	5	10.3	--	63
JULY 17...	78	7.6	12.8	10	15	10.7	1.1	200
SEP. 25...	94	7.4	11.4	18	4	11.4	2.0	400

12042300 SOLEDUCK RIVER NEAR FORKS, WASH.

LOCATION.--Lat 48°01'15", long 124°22'55", in SW¼NE¼ sec.16, T.29 N., R.13 W., Clallam County, at bridge on Maxfield Road, 4.6 mi (7.4 km) north of Forks, and at mile 23.4 (37.7 km).

DRAINAGE AREA.--About 194 mi^2 (502 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1971 to September 1973.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)
NOV.												
29...	1130	9.7	1.6	3.2	.5	36	30	5.9	2.4	.22	.00	.09
JAN.												
16...	1050	5.1	.9	2.3	.6	24	20	3.1	2.2	.17	.01	.18
MAR.												
13...	1100	8.8	1.5	3.0	1.9	30	25	12	2.7	.15	.00	.11
MAY												
30...	1015	10	1.5	2.4	.3	38	31	5.6	1.7	.06	.00	.03
JULY												
17...	1040	12	1.7	3.0	.4	47	39	5.9	2.1	.05	--	.02
SEP.												
25...	1120	12	1.8	3.6	.3	48	39	5.2	2.3	.08	--	.01

DATE	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)
NOV.												
29...	.01	.00	31	1	67	7.6	4.7	0	3	12.9	1.4	80
JAN.												
16...	.11	.00	16	0	48	7.1	5.5	55	45	12.4	3.1	160
MAR.												
13...	.00	.00	28	4	94	7.0	6.6	19	3	12.9	4.8	100
MAY												
30...	.00	.00	31	0	78	7.6	10.6	23	1	11.1	1.5	75
JULY												
17...	.00	.00	37	0	99	7.8	15.7	5	1	9.7	1.2	100
SEP.												
25...	.00	.00	37	0	100	7.8	12.0	18	1	11.1	1.2	540

12043304 HOKO RIVER ABOVE LITTLE HOKO RIVER NEAR SEKIU, WASH.

LOCATION.--Lat 48°15'24", long 124°21'10", in NE¼SE¼ sec.22, T.32 N., R.13 W., Clallam County, 0.2 mi (0.3 km) upstream from Little Hoko River and 2.4 mi (3.9 km) west of Sekiu.

DRAINAGE AREA.--55.5 mi^2 (143.7 km^2), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)
NOV.								
29...	0935	232	6.6	1.6	4.5	.3	26	21
JAN.								
16...	1020	2570	4.0	1.0	3.3	.6	17	14
MAR.								
13...	0945	508	5.4	1.1	3.8	1.8	18	15
MAY								
30...	0850	144	6.8	1.4	4.4	.3	30	25
JULY								
17...	0940	47	8.4	1.8	5.2	.4	42	34
SEP.								
25...	1020	37	9.2	1.8	6.0	.5	44	36

DATE	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
NOV.									
29...	6.6	4.5	.41	.00	.02	.01	.00	23	2
JAN.									
16...	3.2	3.5	.32	.02	.25	.12	.00	14	0
MAR.									
13...	10	4.2	.26	.00	.14	.01	.00	18	3
MAY									
30...	5.0	3.3	.23	.00	.03	.00	.00	23	0
JULY									
17...	4.7	4.1	.10	--	.01	.00	.00	28	0
SEP.									
25...	5.7	4.3	.15	--	.02	.00	.00	30	0

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
NOV.								
29...	61	7.4	4.9	0	1	12.6	1.7	200
JAN.								
16...	47	7.1	6.1	66	90	12.1	2.2	500
MAR.								
13...	78	6.9	5.9	41	10	12.4	3.6	120
MAY								
30...	73	7.5	11.9	23	1	10.4	1.5	200
JULY								
17...	80	7.5	15.7	15	1	9.0	2.1	750
SEP.								
25...	100	7.4	13.0	50	2	10.2	2.8	1200

12043400 PYSHT RIVER NEAR PYSHT, WASH.

LOCATION.--Lat 48°11'23", long 124°09'23", in NE¼NE¼ sec.18, T.31 N., R.11 W., Clallam County, at bridge on State Highway 112, 1.9 mi (3.1 km) southwest of Pysht.

DRAINAGE AREA.--37.6 mi^2 (97.4 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1971 to September 1973.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
NOV.												
29...	0845	7.9	1.6	5.4	.7	25	21	10	3.5	1.1	.00	.07
JAN.												
16...	0920	4.1	.9	3.6	3.4	18	15	6.1	3.5	.76	.02	.27
MAR.												
13...	0910	5.6	1.2	4.1	2.0	16	13	13	3.4	.38	.00	.10
MAY												
30...	0805	7.9	1.4	4.9	.4	29	24	9.4	3.5	.23	.00	.05
JULY												
17...	0900	9.9	2.0	5.7	.5	44	36	10	4.1	.08	--	.05
SEP.												
25...	0830	11	2.1	6.7	.5	42	34	14	4.5	.15	--	.02

DATE	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
NOV.												
29...	.01	.00	26	6	67	7.3	4.4	2	2	12.6	2.0	350
JAN.												
16...	.15	.00	14	0	62	7.2	6.0	69	70	11.5	1.8	400
MAR.												
13...	.00	.00	19	6	86	6.8	6.8	30	3	12.3	4.1	100
MAY												
30...	.00	.00	26	2	83	7.6	10.4	25	1	10.5	1.2	325
JULY												
17...	.02	.00	33	0	110	7.4	15.2	23	2	8.8	2.8	550
SEP.												
25...	.00	.00	36	2	120	7.4	11.4	47	1	9.9	2.7	1500

12045560 ELWHA RIVER BELOW LITTLE RIVER NEAR PORT ANGELES, WASH.

LOCATION.--Lat 48°03'56", long 123°34'35", in SW¼NE¼ sec.28, T.30 N., R.7 W., Clallam County, at U.S. Highway 101 bridge, 0.3 mi (0.5 km) downstream from Little River, 1.0 mi (1.6 km) downstream from gaging station and 8 mi (12.9 km) southwest of Port Angeles.

DRAINAGE AREA.--About 294 mi² (761 km²).

PERIOD OF RECORD.--Chemical analyses: July 1959 to June 1960, July 1960 to September 1970 (partial-record station), October 1971 to September 1973. Published as 12045500 prior to October 1971.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance, and coliform data furnished by Washinton State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)
NOV.								
28...	1645	668	15	1.4	2.3	.3	54	44
JAN.								
15...	1650	6900	12	1.4	2.0	.3	40	33
MAR.								
12...	1700	1080	15	1.3	2.2	.1	48	39
MAY								
30...	0705	1660	10	.9	1.4	.2	34	28
JULY								
17...	0750	1350	12	.9	1.6	.2	41	34
SEP.								
25...	0730	520	14	.9	2.1	.2	44	36

DATE	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
NOV.									
28...	8.6	1.2	.03	.00	.05	.01	.00	43	0
JAN.									
15...	6.6	1.4	.07	.00	.08	.07	.00	36	3
MAR.									
12...	8.6	1.0	.01	.00	.05	.00	.00	43	3
MAY									
30...	6.9	1.3	.03	.00	.05	.00	.00	29	1
JULY									
17...	7.3	.8	.11	--	.02	.00	.00	34	0
SEP.									
25...	8.2	1.2	.05	--	.01	.00	.00	39	3

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
NOV.								
28...	90	7.8	4.7	2	2	12.9	1.4	200
JAN.								
15...	88	7.5	4.5	29	35	13.3	2.0	150
MAR.								
12...	112	7.6	5.6	9	2	13.0	1.9	56
MAY								
30...	78	7.7	8.0	10	3	11.8	1.1	49
JULY								
17...	78	7.7	11.2	2	1	10.8	1.3	60
SEP.								
25...	95	7.7	10.8	10	1	10.6	1.4	160

12048600 DUNGENESS RIVER AT HIGHWAY 101 NEAR SEQUIM, WASH.

LOCATION.--Lat 48°04'34", long 123°08'58", in NE¼SE¼ sec.23, T.30 N., R.4 W., Clallam County, at U.S Highway 101 bridge, 1.4 mi (2.3 km) southeast of Carlsborg, 1.8 mi (2.9 km) west of Sequim, 5.4 mi (8.7 km) downstream from gaging station, and at mile 6.4 (10.3 km).

DRAINAGE AREA.--178 mi^2 (461 km^2).

PERIOD OF RECORD.--Chemical analyses: July 1959 to June 1960, July 1960 to September 1970 (partial-record station), October 1971 to September 1973. Prior to October 1971, published as 12048000.
Water temperatures: July 1968 to December 1969, at site 5.4 mi (8.7 km) upstream.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)
NOV.												
28...	1600	21	3.0	3.9	.5	74	61	9.8	2.6	.02	.00	.05
JAN.												
15...	1540	13	2.1	2.6	.7	48	39	7.0	1.9	.13	.01	.17
MAR.												
12...	1605	21	3.3	3.7	.3	79	65	9.5	1.5	.02	.00	.06
MAY												
29...	1615	15	1.8	3.0	.3	59	48	7.3	1.2	.03	.00	.04
JULY												
16...	1730	13	1.6	2.1	.3	53	43	5.9	.9	.02	--	.02
SEP.												
24...	1530	19	2.6	3.6	.5	75	62	7.1	1.9	.16	--	.08

DATE	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)
NOV.												
28...	.01	.00	65	4	150	7.8	4.1	0	2	13.0	1.9	50
JAN.												
15...	.07	.00	41	2	105	7.4	5.6	45	4	12.3	3.1	150
MAR.												
12...	.00	.00	66	1	170	7.8	7.0	9	2	12.6	2.0	120
MAY												
29...	.00	.00	45	0	110	7.9	12.0	11	3	11.0	1.2	41
JULY												
16...	.00	.00	39	0	109	7.9	15.5	7	2	9.8	1.1	--
SEP.												
24...	.01	.00	58	0	130	8.0	12.6	11	1	11.0	1.2	600

12051500 CHIMACUM CREEK NEAR CHIMACUM, WASH.

LOCATION.--Lat 47°58'27", long 122°46'35", in W½ SW¼ sec.26, T.29 N., R.1 W., Jefferson County, at private bridge 2.6 mi (4.2 km) south of Chimacum and 6.8 mi (10.9 km) upstream from mouth.

DRAINAGE AREA.--13.8 mi^2 (35.7 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)
NOV.												
28...	1445	16	9.3	6.9	1.9	84	69	14	6.2	.28	.01	.11
MAR.												
12...	1435	14	6.9	6.4	1.6	67	55	12	5.1	.37	.01	.27
MAY												
29...	1510	15	8.6	6.5	1.3	89	73	9.0	4.1	.13	.00	.09
JULY												
16...	1620	15	8.9	6.5	1.4	95	78	8.4	4.4	.14	.00	.07
SEP.												
24...	1425	15	9.3	7.1	2.0	99	81	8.0	4.7	.14	.00	.09

DATE	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)
NOV.												
28...	.13	.02	78	9	170	7.5	6.1	20	3	11.3	4.3	1000
MAR.												
12...	.07	.04	63	8	170	7.5	8.4	238	4	10.6	3.4	350
MAY												
29...	.10	.07	73	0	160	7.9	19.0	42	2	10.0	1.8	2250
JULY												
16...	.10	.06	74	0	180	7.8	19.5	112	1	9.2	2.4	--
SEP.												
24...	.08	.05	76	0	190	7.7	14.0	144	2	10.2	3.2	4200

12051530 CHIMACUM CREEK AT HADLOCK, WASH.

LOCATION.--Lat 48°01'51", long 122°46'32", in SW¼SW¼ sec.2, T.29 N., R.1 W., Jefferson County, at county road crossing, 1.0 mi (1.6 km) west of Hadlock, 1.4 mi (2.3 km) north of Chimacum, and 2.6 mi (4.2 km) upstream from mouth.

DRAINAGE AREA.--30.5 mi^2 (79.0 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)
NOV.												
28...	1505	18	11	8.3	2.2	94	77	17	9.7	.39	.01	.11
JAN.												
15...	1510	16	7.8	7.1	2.4	52	43	25	8.5	1.4	.00	.30
MAR.												
12...	1455	18	9.9	8.1	1.7	82	67	18	8.8	.43	.01	.34
MAY												
29...	1535	19	11	8.5	1.7	100	82	16	9.1	.37	.02	.17
JULY												
16...	1640	21	13	10	1.8	115	94	21	14	.27	.02	.16
SEP.												
24...	1440	18	11	8.9	2.0	107	88	13	7.9	.28	.01	.17

DATE	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)
NOV.												
28...	.08	.03	90	13	220	7.5	6.0	2	4	10.9	4.8	2000
JAN.												
15...	.09	.03	72	29	200	7.4	7.6	300	5	9.9	3.3	1300
MAR.												
12...	.11	.06	86	18	230	7.5	8.1	260	4	10.4	4.1	3700
MAY												
29...	.15	.12	93	11	220	7.8	17.1	85	3	9.2	2.5	2000
JULY												
16...	.16	.09	110	12	280	7.8	18.5	122	3	8.0	2.9	--
SEP.												
24...	.14	.08	90	2	220	7.7	13.6	133	3	9.5	3.4	--

12052500 BIG QUILCENE RIVER NEAR QUILCENE, WASH.

LOCATION.--Lat 47°48'39", long 122°54'33", in SE¼ sec.22, T.27 N., R.2 W., Jefferson County, at U.S. Highway 101 bridge, 1.9 mi (3.1 km) southwest of Quilcene, and at mile 2.6 (4.2 km).

DRAINAGE AREA.--66.4 mi^2 (172.0 km^2).

PERIOD OF RECORD.--Chemical analyses: July 1959 to June 1960, July 1960 to September 1970 (partial-record site), October 1971 to September 1973. Prior to October 1971, published as 12052300.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)
NOV.										
28...	1415	13	2.3	4.9	.2	47	39	3.7	10	.09
JAN.										
15...	1340	9.2	1.7	2.2	.1	37	30	2.5	2.7	.09
MAR.										
12...	1410	13	2.2	3.7	.1	46	38	3.1	6.5	.07
MAY										
29...	1430	13	1.8	2.7	.2	49	40	2.9	4.7	.03
JULY										
16...	1550	14	1.9	3.8	.2	48	39	3.3	7.6	.04
SEP.										
24...	1320	18	2.3	6.5	.2	49	40	2.9	24	.04

DATE	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPE-CIEIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)
NOV.										
28...	.00	.04	.01	.00	42	3	114	7.6	4.8	2
JAN.										
15...	.00	.01	.00	.00	30	0	80	7.1	6.7	14
MAR.										
12...	.00	.07	.01	.00	42	4	109	8.0	7.0	9
MAY										
29...	.00	.06	.00	.00	40	0	93	7.6	13.8	10
JULY										
16...	--	.04	.01	.00	42	3	112	7.8	15.9	5
SEP.										
24...	--	.09	.02	.00	54	14	140	7.6	11.4	14

DATE	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
NOV.									
28...	1	13.0	1.9	80	0	14	4	.1	10
JAN.									
15...	4	12.2	4.7	100	0	2	2	.4	10
MAR.									
12...	1	12.3	.7	37	0	2	2	.1	50
MAY									
29...	1	11.0	2.0	56	0	2	0	.1	20
JULY									
16...	1	10.0	1.2	--	20	10	0	.0	10
SEP.									
24...	1	10.8	2.0	550	0	0	4	.1	40

12053500 DOSEWALLIPS RIVER AT BRINNON, WASH.

LOCATION.--Lat 47°41'25", long 122°53'52", near center of NW¼ sec.2, T.25 N., R.2 W., Jefferson County, at U.S. Highway 101 bridge, 0.2 mi (0.3 km) north of Brinnon and at mile 0.2 (0.3 km).

DRAINAGE AREA.--116 mi^2 (300 km^2).

PERIOD OF RECORD.--Chemical analyses: July 1959 to June 1960, July 1960 to September 1970 (partial-record station), October 1971 to September 1973.
Water temperatures: October 1969 to January 1971, at site 6.8 mi (10.9 km) upstream published as 12053000.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES. WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)
NOV.												
28...	1315	15	1.5	2.4	.4	50	41	7.0	2.4	.05	.00	.04
JAN.												
15...	1230	9.7	1.0	1.3	.2	33	27	4.1	1.1	.11	.00	.03
MAR.												
12...	1325	15	1.5	2.2	.2	53	43	6.2	1.0	.02	.00	.03
MAY												
29...	1400	13	.9	1.4	.2	43	35	7.2	1.3	.05	.00	.03
JULY												
16...	1520	12	.9	1.4	.2	42	34	6.4	.8	.09	--	.02
SEP.												
24...	1300	15	1.3	2.1	.2	52	43	6.4	1.2	.04	--	.03

DATE	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)
NOV.												
28...	.00	.00	44	3	114	7.7	4.4	2	1	31.0	1.6	31
JAN.												
15...	.02	.00	28	1	70	7.1	5.4	13	8	12.6	4.2	150
MAR.												
12...	.00	.00	44	0	117	7.8	6.9	11	2	12.8	1.3	<20
MAY												
29...	.00	.00	36	1	85	7.5	12.0	9	1	11.4	2.2	80
JULY												
16...	.00	.00	34	0	82	7.8	14.6	4	2	10.3	1.1	--
SEP.												
24...	.01	.00	43	0	100	7.7	11.6	8	.3	11.1	1.7	500

12054000 DUCKABUSH RIVER NEAR BRINNON, WASH.

LOCATION.--Lat 47°41'03", long 123°00'37", in NW¼SW¼ sec.1, T.25 N., R.3 W., Jefferson County, at gaging station 5.2 mi (8.4 km) west of Brinnon and at mile 4.5 (7.2 km).

DRAINAGE AREA.--66.5 mi^2 (172.2 km^2).

PERIOD OF RECORD.--Chemical analyses: April 1972 to September 1973. Records for periods July 1960 to September 1961, published as 12054000 and November 1961 to February 1972, published as 12054100, were collected at site 4.4 mi (7.1 km) downstream.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)
NOV. 28...	1245	212	14	1.2	1.9	.2	40	33
JAN. 15...	1200	2100	6.9	.7	1.0	.2	24	20
MAR. 12...	1305	254	11	1.1	1.6	.1	41	34
MAY 29...	1335	424	10	.8	1.1	.1	34	28
JULY 16...	1500	297	9.7	.9	1.1	.1	37	30
SEP. 24...	1230	218	9.8	1.1	1.9	.1	35	29

DATE	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
NOV. 28...	4.7	1.9	.06	.00	.07	.01	.00	40	7
JAN. 15...	2.9	1.1	.07	.00	.03	.01	.00	20	0
MAR. 12...	4.5	.7	.02	.00	.03	.06	.00	32	0
MAY 29...	5.0	1.2	.04	.00	.03	.00	.00	28	0
JULY 16...	4.6	.7	.02	--	.01	.00	.00	28	0
SEP. 24...	4.3	1.1	.06	--	.01	.00	.00	29	0

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
NOV. 28...	120	7.6	4.3	2	1	10.3	1.6	46
JAN. 15...	55	7.2	5.1	17	5	12.9	2.4	70
MAR. 12...	81	7.7	5.9	5	1	13.0	1.3	<20
MAY 29...	70	7.5	8.4	7	1	11.8	1.7	70
JULY 16...	67	7.8	12.8	3	1	10.4	.9	--
SEP. 24...	66	7.5	10.4	17	1	11.4	1.8	400

12054500 HAMMA HAMMA RIVER NEAR ELDON, WASH.

LOCATION.--Lat 47°35'18", long 123°06'57", in SE¼NW¼ sec.7, T.24 N., R.3 W., Mason County, at former gaging station 0.3 mi (0.5 km) downstream from Watson Creek, 4.6 mi (7.4 km) northwest of Eldon, and at mile 6.2 (10.0 km).

DRAINAGE AREA.--51.3 mi² (132.9 km²).

PERIOD OF RECORD.--Chemical analyses: March 1972 to September 1973.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
NOV.												
28...	1200	10	1.1	1.5	.3	37	30	3.1	2.1	.10	.00	.06
MAR.												
12...	1220	7.6	1.2	1.3	.1	31	25	2.3	.8	.05	.00	.05
MAY												
29...	1250	8.9	.9	1.0	.1	32	26	3.2	1.3	.06	.00	.04
JULY												
16...	1425	9.8	1.1	1.3	.2	41	34	2.9	1.5	.04	--	.01
SEP.												
24...	1150	10	1.2	1.6	.2	38	31	3.2	2.6	.15	--	.04

DATE	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
NOV.												
28...	.01	.00	29	0	70	7.6	4.9	0	1	12.7	1.5	50
MAR.												
12...	.00	.00	24	0	60	7.5	6.4	5	1	12.7	1.6	40
MAY												
29...	.00	.00	26	0	61	7.4	8.4	7	1	11.6	2.0	70
JULY												
16...	.01	.00	29	0	71	7.8	11.4	2	1	11.0	1.0	--
SEP.												
24...	.00	.00	30	0	75	7.4	10.1	7	1	11.2	2.4	400

12056500 NORTH FORK SKOKOMISH RIVER BELOW STAIRCASE RAPIDS, NEAR HOODSPORT, WASH.

LOCATION.--Lat 47°30'52", long 123°19'43", in NW¼ sec.4, T.23 N., R.5 W., Mason County, Olympic National Park, temperature recorder at gaging station on left bank 1.2 mi (1.9 km) upstream from Lake Cushman, 2.8 mi (4.5 km) upstream from Dry Creek, 11.3 mi (18.2 km) northwest of Hoodsport, and at mile 29.2 (47.0 km).

DRAINAGE AREA.--57.2 mi^2 (148.1 km^2).

PERIOD OF RECORD.--Water temperatures: April 1965 to September 1973.

EXTREMES.--1972-73:
Water temperatures: Maximum, 14.0°C Aug. 13; minimum, 1.0°C Dec. 8-12, 16, 17, Jan. 8-11.

Period of record:
Water temperatures: Maximum 14.0°C Aug. 17, 18, 1965, Aug. 13, 1973; minimum (1965-67, 68-73), 0.5°C Dec. 27, 1965.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.0	7.0	4.5	4.5	3.5	3.5	3.0	3.0	2.0	2.0	3.0	2.0
2	8.0	8.0	5.0	4.5	3.5	3.5	3.0	3.0	2.0	2.0	3.0	2.0
3	8.0	8.0	5.5	5.0	3.5	3.0	3.0	2.0	2.0	2.0	3.0	3.0
4	8.0	7.0	5.5	5.5	3.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0
5	7.0	6.5	5.5	5.0	2.0	1.5	2.0	2.0	2.0	2.0	3.0	3.0
6	6.5	6.5	5.0	5.0	1.5	1.5	2.0	1.5	2.0	1.5	3.0	3.0
7	7.0	6.5	5.0	5.0	1.5	1.5	1.5	1.5	1.5	1.5	3.0	3.0
8	8.0	7.0	5.0	5.0	1.5	1.0	1.5	1.0	1.5	1.5	3.0	3.0
9	8.0	8.0	5.0	5.0	1.0	1.0	1.0	1.0	2.0	1.5	3.0	3.0
10	8.0	6.5	5.0	5.0	1.0	1.0	1.0	1.0	2.0	2.0	3.0	3.0
11	6.5	6.5	5.0	5.0	1.0	1.0	1.5	1.0	2.0	2.0	3.0	3.0
12	6.5	6.5	5.0	5.0	1.5	1.0	1.5	1.5	2.0	2.0	3.0	3.0
13	6.5	6.5	5.0	5.0	1.5	1.5	2.0	1.5	2.0	2.0	3.0	3.0
14	6.5	6.5	5.0	5.0	1.5	1.5	2.0	2.0	2.0	2.0	3.0	3.0
15	6.5	6.5	5.0	5.0	1.5	1.5	2.0	2.0	2.0	2.0	3.5	3.0
16	6.5	6.5	5.0	4.5	1.5	1.0	2.0	2.0	2.0	2.0	3.5	3.5
17	6.5	6.5	4.5	4.5	2.0	1.0	2.0	2.0	2.0	2.0	3.5	3.0
18	6.5	6.5	4.5	4.5	2.0	2.0	2.0	2.0	2.0	2.0	3.0	1.5
19	6.5	6.5	4.5	4.5	3.0	2.0	2.0	2.0	2.0	2.0	2.0	1.5
20	6.5	6.5	4.5	4.5	3.0	3.0	2.0	2.0	2.0	2.0	3.0	2.0
21	7.0	6.5	4.5	4.5	3.0	3.0	2.0	2.0	2.0	2.0	3.0	2.0
22	7.0	7.0	4.5	4.0	3.5	3.0	2.0	2.0	2.0	2.0	3.0	3.0
23	7.0	6.5	4.0	4.0	3.5	3.0	2.0	2.0	2.0	2.0	3.0	3.0
24	6.5	6.5	4.0	4.0	3.0	3.0	2.0	2.0	2.0	2.0	3.5	3.0
25	6.5	6.0	4.0	4.0	3.0	3.0	2.0	2.0	2.0	2.0	3.5	3.0
26	6.0	6.0	4.0	4.0	3.0	3.0	2.0	2.0	2.0	2.0	3.5	3.0
27	6.0	5.5	4.0	3.5	3.0	3.0	2.0	2.0	2.0	2.0	3.5	3.0
28	5.5	5.0	3.5	3.5	3.0	3.0	2.0	2.0	3.0	2.0	3.5	3.0
29	5.0	5.0	3.5	3.5	3.0	3.0	2.0	2.0	---	---	3.5	3.0
30	5.0	4.5	3.5	3.5	3.0	3.0	2.0	1.5	---	---	3.5	3.0
31	4.5	4.5	---	---	3.0	3.0	2.0	1.5	---	---	3.5	3.5
MONTH	8.0	4.5	5.5	3.5	3.5	1.0	3.0	1.0	3.0	1.5	3.5	1.5

12056500 NORTH FORK SKOKOMISH RIVER BELOW STAIRCASE RAPIDS, NEAR HOODSPORT, WASH.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	3.5	3.0	5.0	4.0	6.0	5.0	8.0	7.0	13.5	11.0	11.0	8.5
2	3.5	3.5	5.0	4.5	5.5	4.5	8.5	7.0	13.5	11.0	11.0	9.0
3	3.5	3.5	5.0	4.5	6.5	5.0	9.0	8.0	13.5	11.0	11.5	9.0
4	4.0	3.5	5.0	4.0	6.5	5.5	9.0	8.5	13.0	11.5	12.0	9.5
5	4.0	3.5	5.0	4.0	7.0	6.0	9.0	8.0	12.0	11.5	12.0	10.0
6	4.0	3.5	5.0	4.5	7.0	6.0	8.0	7.0	13.0	11.0	11.5	10.5
7	3.5	3.0	5.0	4.0	6.0	5.5	8.0	7.0	13.0	11.0	12.0	10.0
8	3.5	3.5	4.0	3.0	6.5	5.5	8.5	8.0	13.5	11.0	11.5	9.5
9	4.5	3.5	4.0	3.5	6.0	5.5	9.5	8.0	13.5	11.5	12.0	9.5
10	4.5	4.0	4.5	3.5	6.0	5.0	10.0	8.5	12.0	11.5	12.0	10.0
11	4.5	4.0	5.0	3.5	6.5	5.5	9.5	8.5	12.0	11.0	12.0	10.5
12	4.0	3.5	5.5	4.5	6.5	5.5	10.0	8.5	13.0	10.5	11.5	10.5
13	4.0	3.5	6.0	4.5	5.5	5.5	10.0	9.0	14.0	11.5	11.5	9.5
14	4.0	3.5	6.5	5.0	5.5	5.0	10.0	9.5	12.0	11.5	11.0	9.5
15	4.0	3.5	6.0	5.0	5.5	5.0	11.0	10.0	12.0	10.5	11.0	9.0
16	4.0	3.5	6.0	5.0	5.5	5.0	11.0	10.0	12.0	10.5	10.5	9.0
17	3.5	3.5	6.5	5.0	5.5	4.5	11.5	10.0	11.0	9.0	10.0	9.0
18	3.5	3.0	6.0	5.0	5.5	4.5	11.5	10.0	11.5	9.0	10.0	9.5
19	3.5	3.0	5.5	4.5	6.5	5.5	11.5	10.5	11.5	9.0	9.5	9.5
20	4.0	3.0	5.0	4.5	8.0	6.0	12.0	11.0	11.5	9.0	10.0	9.5
21	4.5	3.5	5.5	4.5	8.5	6.5	11.0	10.5	12.0	9.0	10.0	9.0
22	4.5	4.0	5.5	5.5	8.5	7.0	10.5	10.0	11.0	9.0	9.5	9.0
23	4.5	4.0	5.5	4.5	8.5	6.5	10.0	10.0	10.5	9.0	10.0	9.0
24	4.5	4.0	4.5	4.5	6.5	6.5	10.0	9.5	11.5	9.0	9.5	9.0
25	4.5	4.0	4.5	4.0	7.0	6.5	11.0	9.5	11.5	9.0	9.0	8.5
26	5.0	4.5	4.5	4.0	8.0	7.0	11.5	10.0	12.0	9.5	10.0	9.0
27	5.0	4.0	4.5	4.0	9.5	8.0	13.0	10.5	11.0	10.0	10.0	9.0
28	4.0	3.0	6.0	4.0	9.0	8.5	13.0	11.0	11.5	10.0	10.5	9.0
29	4.0	3.5	6.5	5.0	9.0	8.0	13.0	11.5	12.0	10.5	10.5	9.5
30	5.0	3.5	6.5	5.5	8.5	7.0	13.5	11.0	11.0	10.0	10.0	9.0
31	---	---	6.5	5.0	---	---	13.0	11.0	11.0	9.0	---	---
MONTH	5.0	3.0	6.5	3.0	9.5	4.5	13.5	7.0	14.0	9.0	12.0	8.5

12059500 NORTH FORK SKOKOMISH RIVER NEAR POTLATCH, WASH.

LOCATION.--Lat 47°19'42", long 123°14'33", in NE¼NW¼ sec.7, T.21 N., R.4 W., Mason County, temperature recorder at gaging station on left bank, 1.0 mi (1.6 km) upstream from mouth, 5.4 mi (8.7 km) southwest of Potlatch, and 7.2 mi (11.6 km) downstream from city of Tacoma's Cushman Dam No. 2.

DRAINAGE AREA.--117 mi^2 (303 km^2), including 99 mi^2 (256 km^2) upstream from Cushman Dam No. 2, which is normally noncontributing.

PERIOD OF RECORD.--Water temperatures: March 1965 to September 1973.

EXTREMES.--1972-73:
Water temperatures: Maximum, 17.0°C July 26-28, 30, Aug. 1, 2; minimum, 3.5°C Dec. 8, Apr. 7, 8, 19.

Period of record:
Water temperatures: Maximum, 19.0°C July 8, 1968; minimum, 1.0°C Dec. 27, 1965, Dec. 31, 1968, Jan. 23, 31, Feb. 7, 1969, Jan. 14, 15, 1971.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.5	10.0	8.0	7.0	8.0	7.0	7.0	7.0	6.5	6.0	7.0	6.5
2	11.0	10.0	8.5	8.0	7.0	6.5	7.0	6.5	6.5	6.0	6.5	5.0
3	11.0	10.5	8.5	8.5	6.5	5.5	6.5	6.0	6.5	6.0	5.5	5.5
4	10.5	9.0	9.0	8.5	5.5	5.0	6.0	5.5	6.0	5.5	6.0	5.5
5	10.0	8.0	8.5	8.5	5.0	4.5	5.5	5.5	5.5	5.0	6.0	5.0
6	10.0	8.0	8.5	8.5	4.5	4.5	5.5	4.5	5.5	5.0	7.0	5.5
7	10.0	8.5	8.5	8.5	4.5	4.0	4.5	4.5	5.5	5.0	7.0	6.0
8	11.0	9.0	8.5	8.0	4.0	3.5	4.5	4.0	5.5	5.0	7.0	5.0
9	10.5	10.0	8.5	8.5	4.5	4.0	4.0	4.0	6.0	5.5	6.5	6.0
10	10.0	9.0	8.5	8.5	4.5	4.0	4.5	4.0	6.0	5.0	6.0	6.0
11	10.0	8.5	8.5	8.0	4.5	4.5	5.0	4.5	6.0	6.0	7.0	5.0
12	10.0	8.0	8.5	8.0	5.5	4.5	5.5	5.0	6.0	6.0	6.0	5.5
13	10.0	8.0	8.5	8.5	5.0	4.5	6.0	5.5	6.0	5.5	5.5	4.5
14	10.5	9.0	8.5	8.0	5.5	5.0	6.5	6.0	6.0	5.5	5.5	4.5
15	10.0	8.5	8.0	7.0	5.5	5.0	6.5	6.5	6.5	6.0	6.0	4.5
16	10.0	8.0	8.0	7.0	5.0	5.0	6.5	6.5	7.0	6.5	6.5	5.5
17	10.0	8.0	8.0	6.5	5.5	5.0	6.5	6.5	7.0	6.0	5.5	4.5
18	10.0	9.0	8.0	7.0	6.5	5.5	6.5	6.0	7.0	6.0	5.0	4.5
19	9.0	9.0	8.5	8.0	7.0	6.5	6.0	6.0	6.0	5.0	5.5	4.5
20	10.0	9.0	8.0	7.0	8.0	7.0	6.0	5.0	6.0	4.5	6.0	4.5
21	10.5	10.0	8.5	7.0	8.0	8.0	5.5	5.0	6.0	4.5	6.0	4.5
22	11.0	10.0	8.0	8.0	8.5	8.0	5.5	5.5	6.0	4.5	6.5	4.5
23	11.0	10.0	8.0	6.5	8.5	8.5	5.5	5.5	6.5	5.0	7.0	4.5
24	10.0	8.5	6.5	6.0	8.5	8.0	6.0	5.5	6.0	5.5	6.5	4.5
25	9.5	9.0	6.5	6.5	8.0	8.0	6.0	5.5	6.5	6.0	8.0	5.0
26	9.0	8.0	7.0	6.5	8.0	8.0	5.5	5.0	6.5	6.5	6.0	4.0
27	8.5	8.0	6.5	6.0	8.0	8.0	5.5	5.0	6.5	6.5	6.0	4.5
28	8.5	8.0	6.5	6.0	8.0	8.0	6.0	5.5	7.0	6.0	7.0	4.0
29	8.5	8.0	7.0	6.5	8.0	8.0	6.0	6.0	---	---	5.5	4.0
30	8.0	6.0	7.0	6.5	8.0	7.0	6.0	6.0	---	---	5.5	4.5
31	7.0	6.5	---	---	7.0	7.0	6.0	5.5	---	---	6.0	4.0
MONTH	11.5	6.0	9.0	6.0	8.5	3.5	7.0	4.0	7.0	4.5	8.0	4.0

12059500 NORTH FORK SKOKOMISH RIVER NEAR POTLATCH, WASH.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.0	4.5	9.5	4.0	11.0	5.5	10.5	8.0	17.0	11.5	13.5	9.0
2	8.0	4.5	7.0	5.0	9.0	5.5	12.0	7.0	17.0	11.5	13.5	9.0
3	8.0	4.0	9.0	5.5	10.0	5.5	13.5	7.0	16.5	11.0	13.5	9.0
4	8.5	5.0	8.0	5.0	12.0	6.5	13.0	9.5	14.5	12.0	14.5	9.5
5	8.5	5.0	8.5	5.0	12.0	7.0	10.0	8.5	13.5	12.0	14.5	10.5
6	8.0	4.0	7.0	5.0	10.0	8.0	10.5	8.5	14.5	11.0	13.0	11.5
7	8.0	3.5	6.0	4.5	9.0	8.0	10.5	8.0	16.0	11.5	13.0	10.5
8	7.0	3.5	7.0	4.5	10.0	8.0	11.0	8.0	16.5	11.0	13.5	9.5
9	9.0	5.0	8.0	4.5	10.5	6.5	13.5	8.5	16.0	11.5	14.0	9.5
10	9.0	5.0	8.5	4.0	10.0	5.5	11.5	8.5	13.5	11.5	14.5	10.0
11	9.0	5.0	10.0	4.0	10.0	5.5	13.0	8.5	14.5	10.5	14.5	10.5
12	9.0	4.5	11.0	5.0	9.0	6.5	13.5	8.0	16.0	10.5	13.0	11.0
13	8.5	4.5	11.5	6.0	9.0	6.0	14.0	8.5	16.5	12.0	13.0	9.0
14	6.0	4.5	12.0	6.5	8.0	5.5	14.0	9.0	13.5	11.5	12.0	9.5
15	6.0	5.0	11.0	7.0	7.0	5.0	14.5	9.0	13.0	10.5	13.0	9.0
16	6.0	5.0	11.5	6.5	7.0	6.0	14.5	9.5	12.0	11.0	12.0	8.5
17	8.0	4.0	13.0	7.0	10.0	5.5	15.0	10.0	12.0	9.0	11.5	9.5
18	5.0	4.0	10.0	8.0	8.5	5.5	15.0	10.0	14.0	9.0	12.0	10.5
19	7.0	3.5	10.0	6.5	11.0	7.0	14.5	10.0	14.0	9.0	11.0	10.5
20	8.0	4.0	8.0	5.0	11.5	7.0	12.0	10.0	14.0	9.0	12.0	10.5
21	8.5	4.0	10.5	4.5	12.0	7.0	12.0	10.0	14.0	9.0	12.0	11.0
22	6.5	5.0	9.0	6.0	13.0	8.0	11.5	9.0	13.5	9.0	11.5	10.5
23	7.0	5.0	8.0	6.5	10.0	8.0	11.0	9.0	12.0	9.5	12.0	10.5
24	5.5	5.0	8.5	6.5	8.5	8.0	11.5	8.0	14.0	9.0	12.0	10.5
25	9.0	4.0	8.0	4.5	9.0	8.0	14.0	9.0	14.0	9.0	12.0	9.5
26	9.0	5.0	7.0	4.5	9.0	8.0	17.0	10.0	13.0	10.0	12.0	9.5
27	8.5	4.5	6.0	4.5	12.0	8.0	17.0	11.5	13.0	10.5	13.0	9.5
28	7.0	4.0	10.0	4.0	12.0	8.0	17.0	12.0	13.5	10.5	13.0	9.5
29	7.0	4.0	11.0	5.0	10.0	8.0	16.5	12.0	14.0	11.0	12.0	10.5
30	9.5	4.0	11.0	5.5	12.0	7.0	17.0	11.5	12.0	11.0	12.0	9.0
31	---	---	10.0	6.0	---	---	16.5	11.0	13.5	9.5	---	---
MONTH	9.5	3.5	13.0	4.0	13.0	5.0	17.0	7.0	17.0	9.0	14.5	8.5

12061500 SKOKOMISH RIVER NEAR POTLATCH, WASH.

LOCATION.--Lat 47°18'36", long 123°10'33", in SE¼NW¼ sec.15, T.21 N., R.4 W., Mason County, temperature recorder at gaging station at bridge on U.S. Highway 101, 3.7 mi (6.0 km) downstream from confluence of North and South Forks, 4.7 mi (7.6 km) southwest of Potlatch, and 5.3 mi (8.5 km) upstream from mouth.

DRAINAGE AREA.--227 mi^2 (588 km^2).

PERIOD OF RECORD.--Chemical analyses: August 1960 to September 1961, October 1961 to September 1970 (partial-record station), October 1971 to September 1973.
Water temperatures: May 1955 to September 1962, October 1963 to September 1973.

EXTREMES.--1972-73:
Water temperatures: Maximum, 14.5°C July 30, Aug. 2; minimum, 5.5°C Dec. 16.

Period of record:
Water temperatures: Maximum, 20.5°C July 13, 1961; minimum (1955-62, 1964-73), 1.0°C Mar. 7, 1956.

REMARKS.--Temperature probe out of water Sept. 28-30.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)
NOV.								
28...	1045	845	8.0	1.7	2.3	.2	35	29
JAN.								
15...	1105	4560	5.8	1.2	1.9	3.0	32	26
MAR.								
12...	1140	1220	7.0	1.5	2.0	.2	32	26
MAY								
29...	1120	660	8.0	1.5	1.8	.1	37	30
JULY								
16...	1315	288	9.0	2.0	2.2	.2	45	37
SEP.								
24...	1045	540	8.9	1.8	2.5	.2	39	32

DATE	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
NOV.									
28...	2.1	2.1	.08	.00	.17	.03	.01	27	0
JAN.									
15...	9.6	1.8	.09	.00	.25	.05	.00	19	0
MAR.									
12...	2.3	1.8	.04	.00	.12	.01	.00	24	0
MAY									
29...	2.9	2.0	.06	.00	.02	.00	.00	26	0
JULY									
16...	2.1	2.0	.04	--	.01	.01	.00	31	0
SEP.									
24...	2.3	2.7	.11	--	.02	.16	.01	30	0

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
NOV.								
28...	64	7.4	6.1	0	2	9.8	2.2	130
JAN.								
15...	89	7.2	6.6	23	6	12.1	3.2	160
MAR.								
12...	64	7.1	6.5	8	3	12.3	4.1	100
MAY								
29...	65	7.3	11.6	9	2	11.0	3.0	60
JULY								
16...	80	7.6	15.1	23	1	9.7	1.8	--
SEP.								
24...	75	7.4	11.0	11	3	10.1	2.5	400

12061500 SKOKOMISH RIVER NEAR POTLATCH, WASH.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.0	11.0	9.5	9.5	9.5	9.0	6.5	6.5	6.5	6.5	7.0	6.5
2	11.0	11.0	10.0	9.5	9.0	9.0	6.5	6.5	6.5	6.5	6.5	6.5
3	11.0	11.0	10.0	9.5	9.0	8.5	6.5	6.0	6.5	6.5	6.5	6.5
4	11.0	10.5	10.0	9.5	8.5	8.0	6.0	6.0	6.5	6.5	6.5	6.5
5	11.0	10.5	9.5	9.5	8.0	7.0	6.5	6.0	6.5	6.0	6.5	6.5
6	11.0	10.5	9.5	9.5	7.0	6.5	6.0	6.0	6.5	6.0	7.0	6.5
7	11.0	10.5	9.5	9.5	6.5	6.0	6.0	6.0	6.5	6.0	7.0	7.0
8	11.0	10.5	9.5	9.5	6.0	6.0	6.0	6.0	6.5	6.0	8.0	7.0
9	10.5	10.5	9.5	9.5	6.0	6.0	6.0	6.0	6.5	6.5	8.0	8.0
10	11.0	10.5	9.5	9.5	6.0	6.0	6.0	6.0	6.5	6.5	8.0	7.0
11	10.5	10.5	9.5	9.5	6.0	6.0	6.0	6.0	6.5	6.5	8.0	7.0
12	10.5	10.5	9.5	9.5	6.5	6.0	6.0	6.0	6.5	6.5	8.0	7.0
13	10.5	10.5	9.5	9.5	6.0	6.0	6.5	6.0	6.5	6.5	8.0	7.0
14	10.5	10.5	9.5	9.5	6.5	6.0	6.5	6.5	6.5	6.5	8.0	7.0
15	10.5	10.5	9.5	9.0	6.0	6.0	6.5	6.5	6.5	6.5	8.0	7.0
16	10.5	10.5	9.5	9.0	6.0	5.5	6.5	6.5	6.5	6.5	8.0	8.0
17	10.5	10.5	9.0	9.0	6.0	6.0	6.5	6.5	6.5	6.5	8.0	7.0
18	10.5	10.5	9.0	9.0	6.5	6.0	6.5	6.5	6.5	6.5	7.0	6.5
19	10.5	10.5	9.0	9.0	6.5	6.5	6.5	6.5	6.5	6.5	7.0	6.5
20	10.5	10.5	9.0	9.0	6.5	6.5	6.5	6.0	6.5	6.5	8.0	7.0
21	10.5	10.5	9.0	9.0	6.5	6.5	6.5	6.0	6.5	6.5	8.0	6.5
22	10.5	10.5	9.0	9.0	6.5	6.5	6.5	6.5	6.5	6.5	8.0	7.0
23	10.5	10.5	9.5	9.0	6.5	6.5	6.5	6.5	7.0	6.5	8.0	7.0
24	10.5	10.0	9.0	9.0	6.5	6.5	6.5	6.5	7.0	7.0	8.0	7.0
25	10.0	10.0	9.0	9.0	6.5	6.5	6.5	6.0	7.0	7.0	8.5	8.0
26	10.0	10.0	9.0	9.0	6.5	6.5	6.0	6.0	7.0	6.5	8.5	8.0
27	10.0	10.0	9.0	9.0	6.5	6.5	6.5	6.0	6.5	6.5	8.0	8.0
28	10.0	10.0	9.0	9.0	6.5	6.5	6.5	6.5	7.0	6.5	8.5	8.0
29	10.0	10.0	9.0	9.0	6.5	6.5	6.5	6.5	---	---	8.0	8.0
30	10.0	9.5	9.0	9.0	6.5	6.5	6.5	6.5	---	---	8.0	8.0
31	9.5	9.5	---	---	6.5	6.5	6.5	6.0	---	---	8.0	8.0
MONTH	11.0	9.5	10.0	9.0	9.5	5.5	6.5	6.0	7.0	6.0	8.5	6.5

12061500 SKOKOMISH RIVER NEAR POTLATCH, WASH.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.5	8.0	10.0	9.0	10.5	9.5	11.0	10.0	14.0	11.0	12.0	9.0
2	8.5	8.0	10.0	9.5	10.5	9.5	11.5	10.0	14.5	10.5	12.0	9.0
3	8.5	8.0	10.0	9.5	10.5	9.5	11.5	10.0	14.0	10.5	12.0	9.0
4	9.0	8.5	10.0	9.5	11.0	9.5	11.5	10.5	13.0	11.0	12.0	9.5
5	9.0	8.5	10.0	9.0	11.0	10.0	11.0	10.5	12.0	11.0	12.0	9.5
6	9.0	8.5	10.0	9.5	10.5	10.5	11.5	10.5	12.0	10.5	11.5	10.5
7	9.0	8.0	10.0	9.0	10.5	10.0	11.0	10.5	14.0	10.5	12.0	9.5
8	9.0	8.5	10.0	9.0	11.0	10.0	11.5	10.5	14.0	10.5	12.0	9.0
9	9.5	9.0	10.0	9.0	11.0	10.0	12.0	10.5	14.0	10.5	12.0	9.0
10	9.5	9.0	10.0	9.0	11.0	10.0	12.0	11.0	12.0	10.5	12.0	9.5
11	9.5	9.0	10.0	9.0	10.5	10.0	12.0	11.0	13.0	10.0	12.0	10.0
12	9.5	9.0	11.0	9.5	10.5	10.0	12.0	11.0	14.0	10.0	11.5	10.0
13	9.5	9.0	10.5	9.5	10.5	10.0	12.0	11.0	14.0	11.0	12.0	9.0
14	9.5	9.0	11.0	10.0	10.0	9.5	12.0	11.0	12.0	10.5	11.0	9.5
15	9.0	9.0	11.0	10.5	10.0	9.5	12.0	11.0	12.0	10.0	12.0	9.0
16	9.5	9.0	11.0	10.0	10.0	9.5	12.0	11.5	12.0	10.5	11.0	9.0
17	9.5	8.5	11.0	10.0	10.0	8.5	12.0	11.5	12.0	9.0	10.5	9.5
18	9.0	8.5	11.0	10.5	10.0	9.0	12.0	11.5	12.0	9.0	11.0	9.5
19	9.0	8.5	10.5	10.0	10.5	9.5	12.0	11.5	12.0	9.0	10.5	9.5
20	9.0	8.5	10.0	9.5	11.0	10.0	12.0	11.5	12.0	9.5	12.0	10.0
21	9.5	8.5	10.5	9.0	11.0	10.0	11.5	11.0	12.0	9.0	12.0	11.0
22	9.5	9.0	10.5	10.0	11.5	10.5	11.5	10.5	12.0	9.0	11.5	11.0
23	9.5	9.0	10.0	9.5	11.0	10.5	11.0	10.5	11.5	9.5	12.0	10.5
24	9.5	9.0	9.5	9.0	10.5	10.0	11.5	10.5	12.0	9.0	12.0	11.0
25	9.5	9.0	9.0	8.5	10.5	10.0	12.0	10.5	12.0	9.0	12.0	10.0
26	10.0	9.0	9.0	8.5	10.5	10.0	12.0	10.5	12.0	9.5	12.0	10.5
27	10.0	9.0	9.0	8.5	11.5	10.0	12.0	10.5	12.0	10.0	12.0	10.5
28	9.5	9.0	10.5	8.5	11.0	10.5	12.0	11.0	12.0	10.0	-	10.5
29	9.5	9.0	10.5	9.5	11.0	10.0	12.0	11.0	12.0	10.0	-	-
30	10.0	9.0	11.0	9.5	11.5	10.0	14.5	11.0	11.0	10.0	-	10.5
31	---	---	10.5	9.5	---	---	14.0	11.0	12.0	9.5	---	---
MONTH	10.0	8.0	11.0	8.5	11.5	8.5	14.5	10.0	14.5	9.0	-	-

12065020 TIGER LAKE NEAR BELFAIR, WASH.

LOCATION.--Lat 47°30'31", long 122°50'08", in SE¼SW¼ sec.5, T.23 N., R.1 W., Mason County, 4.1 mi (6.6 km) north of Belfair.

DRAINAGE AREA.--0.70 mi^2 (1.81 km^2).

PERIOD OF RECORD.--Chemical analyses: February 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for southernmost point of lake. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, FEBRUARY 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
FEB.										
28...	1125	3.0	6.1	1.4	9	10	1.8	.4	1.2	.0
28...	1135	35	5.4	1.4	20	0	--	--	--	--
MAY										
07...	1130	3.0	13.2	1.3	100	0	--	--	--	--
07...	1140	34	11.2	1.3	40	0	--	--	--	--
JUNE										
20...	0950	3.0	17.8	1.0	20	0	--	--	--	--
20...	1000	32	15.5	1.0	60	0	--	--	--	--
SEP.										
05...	1105	3.0	18.8	.7	50	0	1.5	.4	1.4	.2
05...	1115	31	17.8	1.0	80	0	--	--	--	--

DATE	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
FEB.										
28...	6	5	1.8	2.3	.21	.00	.04	.13	.17	.00
28...	7	6	--	--	.19	.00	.05	.17	.22	.00
MAY										
07...	236	194	--	--	.05	.00	.03	.25	.28	.00
07...	8	7	--	--	.07	.00	.10	.25	.35	.01
JUNE										
20...	11	9	--	--	.01	.00	.03	.07	.10	.00
20...	12	10	--	--	.01	.00	.07	.06	.13	.06
SEP.										
05...	9	7	1.8	1.3	.01	.00	.04	.26	.30	.01
05...	13	11	--	--	.01	.00	.06	.25	.31	.00

DATE	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR (PLATINUM-COBALT UNITS)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
FEB.										
28...	.00	12	.02	3	6	1	16	0	2.0	3.5
28...	.00	--	--	--	--	--	16	0	--	--
MAY										
07...	.00	--	--	--	--	--	17	15	1.8	3.5
07...	.00	--	--	--	--	--	17	15	--	--
JUNE										
20...	.00	--	--	--	--	--	16	0	2.2	5.0
20...	.00	--	--	--	--	--	17	5	--	--
SEP.										
05...	.00	12	.02	0	5	0	18	5	6.0	4.0
05...	.00	--	--	--	--	--	18	5	--	--

12068500 DEWATTO RIVER NEAR DEWATTO, WASH.

LOCATION.--Lat 47°28'10", long 123°01'33", in NE¼SW¼ sec.23, T.23 N., R.3 W., Mason County, at highway bridge 400 ft (122 m) upstream from gaging station, 2.2 mi (3.5 km) northeast of Dewatto and at mile 2.0 (3.2 km).

DRAINAGE AREA.--18.4 mi^2 (47.7 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1971 to September 1973.
Water temperatures: April 1968 to August 1970.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)
NOV.								
27...	1030	26	6.5	2.6	2.2	.3	37	30
JAN.								
15...	1020	255	2.6	.9	1.1	.2	15	12
MAR.								
12...	1015	60	4.9	1.8	1.8	.1	28	23
MAY								
29...	0945	24	6.9	2.6	1.9	.2	38	31
JULY								
16...	1130	16	8.2	3.2	2.5	.3	49	40
SEP.								
24...	0910	30	7.8	2.9	2.7	.3	43	35

DATE	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
NOV.									
27...	2.4	1.4	.18	.00	.06	.02	.02	27	0
JAN.									
15...	2.5	1.1	.13	.00	.03	.01	.00	10	0
MAR.									
12...	2.1	1.3	.08	.00	.06	.01	.01	20	0
MAY									
29...	2.1	1.6	.07	.00	.02	.02	.01	28	0
JULY									
16...	1.1	1.4	.06	--	.02	.02	.02	34	0
SEP.									
24...	2.0	1.9	.16	--	.05	.02	.01	31	0

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
NOV.								
27...	59	7.3	6.1	2	2	11.8	3.0	220
JAN.								
15...	36	6.7	6.0	32	1	11.8	4.8	500
MAR.								
12...	53	7.4	7.2	28	2	12.1	1.8	190
MAY								
29...	66	7.3	10.4	29	1	11.4	3.0	150
JULY								
16...	83	7.6	14.8	24	1	12.0	2.0	--
SEP.								
24...	84	7.5	11.6	63	3	10.3	2.2	<800

12072615 LONG LAKE NEAR PORT ORCHARD, WASH.

LOCATION.--Lat 47°29'57", long 122°34'57", in SW¼NW¼ sec.8, T.23 N., R.2 E., Kitsap County, 3.5 mi (5.6 km) southeast of Port Orchard.

DRAINAGE AREA.--10.2 mi² (26.4 km²).

PERIOD OF RECORD.--Chemical analyses: March 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for lake outlet. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, MARCH 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
MAR.											
05...	1000	3.0	7.6	9.9	200	20	5.7	2.9	3.1	.8	33
05...	1015	8.0	7.5	9.8	200	20	--	--	--	--	32
MAY											
10...	0920	3.0	13.2	5.1	210	20	--	--	--	--	41
10...	0930	7.0	13.0	5.0	260	30	--	--	--	--	38
JUNE											
22...	1040	3.0	21.0	6.3	190	10	--	--	--	--	45
22...	1045	7.0	18.3	6.3	190	20	--	--	--	--	46
SEP.											
07...	1030	3.0	17.8	12	150	20	6.5	3.8	4.7	.3	47
07...	1040	7.0	17.7	13	190	10	--	--	--	--	48

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
MAR.											
05...	0	27	5.1	3.1	.27	.00	.19	.32	.51	.02	.00
05...	--	26	--	--	.28	.00	.22	.47	.69	.03	.00
MAY											
10...	--	34	--	--	.02	.00	.19	.28	.47	.03	.00
10...	--	31	--	--	.02	.00	.19	.22	.41	.03	.00
JUNE											
22...	0	37	--	--	.01	.00	.41	.09	.50	.04	.00
22...	0	38	--	--	.02	.00	.40	.07	.47	.02	.00
SEP.											
07...	--	39	3.4	2.6	.04	.00	.10	.40	.50	.02	.00
07...	--	39	--	--	.05	.00	.12	.57	.69	.02	.00

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	CARBON DIOXIDE (CO2) (MG/L)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
MAR.											
05...	47	.06	5	26	0	59	7.2	65	3.3	20	9.5
05...	--	--	--	--	--	59	--	65	--	--	--
MAY											
10...	--	--	--	--	--	74	--	55	--	2.6	6.5
10...	--	--	--	--	--	74	--	50	--	--	--
JUNE											
22...	--	--	--	--	--	74	--	30	--	8.5	12
22...	--	--	--	--	--	74	--	30	--	--	--
SEP.											
07...	57	.08	0	32	0	72	--	10	--	3.6	6.5
07...	--	--	--	--	--	72	--	20	--	--	--

12073505 HORSESHOE LAKE NEAR BURLEY, WASH.

LOCATION.--Lat 47°24'20", long 122°39'48", in SE¼SW¼ sec.10, T.22 N., R.1 E., Kitsap County, 1.7 mi (2.7 km) southwest of Burley.

DRAINAGE AREA.--0.48 mi^2 (1.24 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for the southernmost point of lake. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, MARCH 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
MAR.										
01...	1035	3.0	7.0	.4	20	0	1.8	.3	2.0	.2
01...	1040	16	6.1	.3	40	10	--	--	--	--
MAY										
07...	1430	3.0	14.0	.0	20	0	--	--	--	--
07...	1440	16	13.8	.2	9	0	--	--	--	--
JUNE										
20...	1325	3.0	19.2	.1	30	0	--	--	--	--
20...	1335	15	17.5	.1	30	0	--	--	--	--
SEP.										
05...	1435	3.0	18.4	.3	80	0	1.8	.5	2.4	.3
05...	1445	14	17.4	.4	100	0	--	--	--	--

DATE	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
MAR.										
01...	5	4	2.5	3.5	.01	.00	.06	.20	.26	.00
01...	6	5	--	--	.00	.00	.06	.22	.28	.00
MAY										
07...	7	6	--	--	.01	.00	.04	.22	.26	.00
07...	8	7	--	--	.01	.00	.03	.29	.32	.00
JUNE										
20...	13	11	--	--	.00	.00	.04	.08	.12	.00
20...	11	9	--	--	.01	.00	.06	.11	.17	.00
SEP.										
05...	7	6	2.7	2.6	.01	.00	.06	.41	.47	.01
05...	11	9	--	--	.01	.00	.07	.44	.51	.00

DATE	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR (PLATINUM-COBALT UNITS)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
MAR.										
01...	.00	13	.02	2	6	2	19	10	4.0	5.5
01...	.00	--	--	--	--	--	19	10	--	--
MAY										
07...	.00	--	--	--	--	--	20	20	1.9	6.0
07...	.00	--	--	--	--	--	20	20	--	--
JUNE										
20...	.00	--	--	--	--	--	19	5	1.6	9.0
20...	.00	--	--	--	--	--	20	5	--	--
SEP.										
05...	.00	14	.02	5	7	1	22	5	4.2	6.0
05...	.00	--	--	--	--	--	22	5	--	--

12076100 LOST LAKE NEAR SHELTON, WASH.

LOCATION.--Lat 47°09'16", long 123°14'51", in NW¼ sec.12, T.19 N., R.5 W., Mason County, 7.3 mi (11.7 km) southwest of Shelton.

DRAINAGE AREA.--0.95 mi^2 (2.46 km^2).

PERIOD OF RECORD.--Chemical analyses: February 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for southernmost point of lake. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, FEBRUARY 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
FEB.										
26...	1115	3.0	6.0	.9	40	0	1.9	.6	1.4	.0
26...	1125	59	4.3	1.1	110	20	--	--	--	--
APR.										
26...	1030	3.0	12.3	.6	100	0	--	--	--	--
26...	1040	58	5.0	1.0	150	10	--	--	--	--
JUNE										
21...	1135	3.0	19.1	.3	40	0	--	--	--	--
21...	1145	54	6.0	.9	190	30	--	--	--	--
SEP.										
06...	1200	3.0	18.2	.4	50	0	1.9	.7	1.8	.1
06...	1210	54	5.8	1.3	540	83	--	--	--	--

DATE	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
FEB.										
26...	9	7	1.8	3.2	.06	.00	.04	.16	.20	.00
26...	14	11	--	--	.04	.00	.18	.04	.22	.01
APR.										
26...	11	9	--	--	.01	.00	.02	.15	.17	.00
26...	11	9	--	--	.01	.00	.26	.11	.37	.01
JUNE										
21...	15	12	--	--	.01	.00	.05	.06	.11	.00
21...	15	12	--	--	.01	.00	.01	.12	.13	.01
SEP.										
06...	14	11	1.3	2.0	.01	.00	.04	.27	.31	.00
06...	18	15	--	--	.01	.00	.14	.29	.43	.01

DATE	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR (PLATINUM-COBALT UNITS)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
FEB.										
26...	.00	14	.02	1	7	0	20	0	2.3	3.0
26...	.00	--	--	--	--	--	21	10	--	--
APR.										
26...	.00	--	--	--	--	--	22	10	.8	2.5
26...	.00	--	--	--	--	--	26	5	--	--
JUNE										
21...	.00	--	--	--	--	--	21	5	1.9	3.0
21...	.00	--	--	--	--	--	23	10	--	--
SEP.										
06...	.00	15	.02	0	8	0	22	0	.8	3.5
06...	.00	--	--	--	--	--	25	10	--	--

12077490 ISABELLA LAKE NEAR SHELTON, WASH.

LOCATION.--Lat 47°10'36", long 123°06'17", in NW¼SE¼ sec.31, T.20 N., R.3 W., Mason County, 2.3 mi (3.7 km) south of Shelton.

DRAINAGE AREA.--17.5 mi^2 (45.3 km^2).

PERIOD OF RECORD.--Chemical analyses: February 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for lake outlet. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, FEBRUARY 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
FEB.										
27...	1010	3.0	6.8	13	150	10	8.2	2.6	2.8	.1
27...	1020	19	5.9	13	150	10	--	--	--	--
APR.										
26...	1520	3.0	12.6	11	160	10	--	--	--	--
26...	1530	18	12.3	11	150	0	--	--	--	--
JUNE										
21...	1410	3.0	20.0	14	110	0	--	--	--	--
21...	1415	17	15.3	15	130	20	--	--	--	--
SEP.										
06...	1450	3.0	17.2	18	110	20	9.6	3.9	3.8	.2
06...	1500	16	17.1	17	130	20	--	--	--	--

DATE	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
FEB.										
27...	34	28	3.0	4.2	.21	.00	.07	.32	.39	.00
27...	37	30	--	--	.21	.00	.06	.20	.26	.01
APR.										
26...	39	32	--	--	.06	.00	.07	.12	.19	.00
26...	39	32	--	--	.01	.00	.07	.19	.26	.00
JUNE										
21...	49	40	--	--	.01	.00	.08	.07	.15	.01
21...	49	40	--	--	.01	.00	.09	.03	.12	.02
SEP.										
06...	51	42	2.0	3.7	.01	.00	.10	.41	.51	.01
06...	55	45	--	--	.01	.00	.10	.46	.56	.01

DATE	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR (PLATINUM-COBALT UNITS)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
FEB.										
27...	.00	51	.07	2	31	3	62	15	7.4	2.5
27...	.00	--	--	--	--	--	61	15	--	--
APR.										
26...	.00	--	--	--	--	--	71	10	2.5	3.0
26...	.00	--	--	--	--	--	71	10	--	--
JUNE										
21...	.00	--	--	--	--	--	82	10	3.5	5.0
21...	.04	--	--	--	--	--	83	10	--	--
SEP.										
06...	.00	66	.09	0	40	0	88	5	9.1	5.5
06...	.00	--	--	--	--	--	88	5	--	--

12079300 MCINTOSH LAKE NEAR TENINO, WASH.

LOCATION.--Lat 46°51'41", long 122°46'29", in NW¼NW¼ sec.23, T.16 N., R.1 W., Thurston County, 3.6 mi (5.8 km) east of Tenino.

DRAINAGE AREA.--2.26 mi^2 (5.85 km^2).

PERIOD OF RECORD.--Chemical analyses: February 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for southernmost point of lake. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, FEBRUARY 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
FEB.										
20...	1150	3.0	5.9	10	190	0	5.3	1.6	4.2	.5
20...	1200	7.0	6.0	10	190	10	--	--	--	--
APR.										
24...	0955	3.0	12.3	6.5	150	10	--	--	--	--
24...	1000	7.0	12.3	6.5	170	30	--	--	--	--
JUNE										
19...	0930	3.0	17.1	5.8	210	40	--	--	--	--
19...	0940	7.0	16.9	5.8	240	30	--	--	--	--
SEP.										
17...	0845	3.0	17.9	8.1	220	20	5.7	1.9	5.0	1.4
17...	0850	5.0	17.9	8.2	290	60	--	--	--	--

DATE	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
FEB.										
20...	25	21	5.5	4.2	.49	.00	.11	.28	.39	.02
20...	25	21	--	--	.48	.00	.14	.18	.32	.01
APR.										
24...	26	21	--	--	.02	.00	.11	.19	.30	.01
24...	27	22	--	--	.02	.00	.08	.22	.30	.01
JUNE										
19...	36	30	--	--	.01	.00	.20	.09	.29	.03
19...	36	30	--	--	.01	.00	.18	.02	.20	.04
SEP.										
17...	36	30	3.8	2.3	.00	.00	.08	.36	.44	.06
17...	36	30	--	--	.01	.00	.05	.57	.62	.06

DATE	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR (PLATINUM-COBALT UNITS)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
FEB.										
20...	.00	44	.06	3	20	0	57	15	3.2	5.0
20...	.00	--	--	--	--	--	57	20	--	--
APR.										
24...	.00	--	--	--	--	--	59	5	.7	4.5
24...	.00	--	--	--	--	--	59	5	--	--
JUNE										
19...	.00	--	--	--	--	--	63	20	4.9	5.0
19...	.00	--	--	--	--	--	63	35	--	--
SEP.										
17...	.00	46	.06	3	22	0	61	10	1.3	4.0
17...	.00	--	--	--	--	--	61	10	--	--

12079900 MUNN LAKE NEAR OLYMPIA, WASH.

LOCATION.--Lat 46°58'56", long 122°52'49", in SW¼SW¼ sec.1, T.17 N., R.2 W., Thurston County, 1.6 mi (2.6 km) southeast of Tumwater.

DRAINAGE AREA.--0.67 mi^2 (1.74 km^2).

PERIOD OF RECORD.--Chemical analyses: February 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for southernmost point of lake. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, FEBRUARY 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB.											
22...	1035	3.0	6.0	.5	90	0	2.1	.9	1.7	.7	16
22...	1045	15	5.7	.4	230	10	--	--	--	--	9
APR.											
24...	1345	3.0	13.1	.2	90	10	--	--	--	--	11
24...	1355	14	12.0	.3	100	10	--	--	--	--	12
JUNE											
19...	1300	3.0	18.4	.3	110	0	--	--	--	--	17
19...	1310	10	17.1	.4	160	10	--	--	--	--	15
SEP.											
17...	1500	3.0	17.9	.6	170	10	1.9	.8	1.8	1.6	15
17...	1510	10	17.5	.6	0	30	--	--	--	--	20

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
FEB.											
22...	0	13	1.8	3.1	.30	.00	.26	.36	.62	.02	.00
22...	--	7	--	--	.31	.00	.28	.40	.68	.02	.00
APR.											
24...	--	9	--	--	.01	.00	.25	.47	.72	.03	.00
24...	--	10	--	--	.03	.00	.34	.32	.66	.03	.00
JUNE											
19...	--	14	--	--	.01	.00	.25	.01	.26	.04	.00
19...	--	12	--	--	.01	.00	.22	.04	.26	.04	.00
SEP.											
17...	--	12	2.4	1.6	.01	.00	.35	1.3	1.7	.08	.00
17...	--	16	--	--	.01	.00	.26	1.1	1.4	.05	.00

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	CARBON DIOXIDE (CO2) (MG/L)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
FEB.											
22...	19	.03	6	9	0	25	6.3	30	13	9.8	9.0
22...	--	--	--	--	--	26	--	25	--	--	--
APR.											
24...	--	--	--	--	--	26	--	20	--	6.1	9.0
24...	--	--	--	--	--	28	--	20	--	--	--
JUNE											
19...	--	--	--	--	--	28	--	30	--	5.6	12
19...	--	--	--	--	--	27	--	55	--	--	
SEP.											
17...	18	.02	1	8	0	28	--	--	--	30	1
17...	--	--	--	--	--	27	--	20	--	--	

12082500 NISQUALLY RIVER NEAR NATIONAL, WASH.

LOCATION.--Lat 46°45'10", long 122°04'57", in SW¼SW¼ sec.29, T.15 N., R.6 E., Pierce County, temperature recorder at gaging station on right bank 100 ft (30 m) downstream from railroad bridge, 1.2 mi (1.9 km) west of National, 3.3 mi (5.3 km) upstream from Mineral Creek, and at mile 57.8 (93.0 km).

DRAINAGE AREA.--133 mi² (344 km²).

PERIOD OF RECORD.--Water temperatures: October 1951 to September 1973.

EXTREMES.--1972-73:
Water temperatures: Maximum, 17.0°C July 31, Aug. 8, 12, 13; minimum, 1.0°C Dec. 7-15, Jan. 6-11.

Period of record:
Water temperatures; Maximum, 18.5°C July 13, 1961, July 3, 1970; minimum (1951-63, 1965-73), freezing point on many days during winter months of most years.

TEMPERATURE (°C) OF WATER, OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.0	8.0	6.0	5.0	5.0	4.0	4.5	3.5	5.0	2.0	5.5	4.5
2	10.5	8.0	6.5	5.0	4.5	4.0	4.0	3.5	5.0	3.0	6.0	4.0
3	9.5	8.0	7.0	6.0	4.0	3.0	3.5	3.0	4.5	3.0	6.0	4.0
4	9.0	6.5	6.5	6.0	3.0	2.0	3.0	2.0	4.0	2.0	7.0	4.0
5	9.0	6.5	6.5	5.5	2.0	2.0	2.0	2.0	4.0	1.5	6.0	4.0
6	9.5	6.0	6.5	5.5	2.0	1.5	2.0	1.0	3.5	1.5	7.0	4.0
7	10.5	6.0	6.5	6.0	1.5	1.0	1.0	1.0	4.0	1.5	6.5	5.0
8	11.0	6.5	6.0	5.5	1.0	1.0	1.0	1.0	5.0	2.0	7.0	4.0
9	8.0	6.5	6.0	5.5	1.0	1.0	1.0	1.0	4.5	3.0	6.5	5.0
10	8.5	6.0	6.0	5.5	1.0	1.0	1.0	1.0	3.0	2.0	5.5	4.0
11	8.0	5.0	5.5	4.5	1.0	1.0	2.0	1.0	5.0	2.0	5.5	4.0
12	10.5	5.5	5.5	4.5	1.0	1.0	3.0	1.5	5.0	3.0	4.5	3.5
13	10.0	6.0	6.0	5.0	1.0	1.0	3.0	3.0	5.0	3.0	6.0	3.0
14	10.0	7.0	5.5	4.5	1.0	1.0	4.5	3.0	4.5	3.0	5.0	2.0
15	9.0	5.0	5.0	4.0	2.0	1.0	4.5	3.5	5.5	3.5	7.0	4.0
16	9.5	5.0	5.5	4.5	2.0	1.5	4.5	4.0	6.5	3.5	5.0	4.0
17	9.5	5.5	5.5	4.0	2.0	1.5	4.5	3.5	6.0	4.5	6.0	3.0
18	9.0	5.0	5.0	4.5	4.0	2.0	4.5	3.0	6.0	4.0	5.5	3.5
19	9.0	5.0	5.5	4.5	4.0	3.5	3.5	3.0	5.5	3.0	6.0	3.5
20	8.5	4.5	5.0	3.5	5.0	4.0	3.5	3.0	5.5	2.0	5.5	4.5
21	9.0	6.5	4.5	3.0	5.0	4.5	4.0	2.0	6.5	2.0	7.0	4.0
22	8.0	6.5	5.0	3.0	5.0	4.5	4.0	2.0	6.0	3.0	7.0	4.0
23	8.0	5.5	5.5	4.5	5.0	4.5	4.5	3.0	6.5	3.0	8.0	3.0
24	8.0	3.5	5.0	4.0	4.5	4.0	4.0	3.5	6.5	4.0	8.5	3.5
25	6.0	4.5	5.0	4.5	4.5	4.0	4.0	3.0	6.0	5.0	7.0	4.5
26	7.0	5.0	5.0	3.5	4.5	4.0	3.0	1.5	6.0	5.0	6.5	4.0
27	5.5	4.5	4.5	3.5	5.0	4.5	3.0	1.5	7.0	5.0	7.0	4.0
28	4.5	2.0	4.5	3.0	4.5	4.0	4.0	2.0	6.0	4.0	7.0	4.5
29	5.5	3.5	5.0	4.0	4.0	3.0	4.0	3.0	---	---	6.5	3.5
30	5.0	2.0	5.0	4.0	4.0	3.5	4.0	3.0	---	---	7.0	4.5
31	6.0	3.0	---	---	4.5	3.5	4.0	3.0	---	---	8.0	4.5
MONTH	11.0	2.0	7.0	3.0	5.0	1.0	4.5	1.0	7.0	1.5	8.5	2.0

12082500 NISQUALLY RIVER NEAR NATIONAL, WASH.--Continued

TEMPERATURE (°C) OF WATER, OCTOBER 1972 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.0	5.0	11.5	5.0	11.5	8.0	13.5	8.0	16.5	8.0	13.5	4.5
2	9.5	4.0	9.5	6.0	12.0	8.0	14.5	8.0	16.5	8.0	14.5	6.0
3	10.0	4.0	10.0	7.0	13.0	8.0	16.5	8.5	16.5	7.0	14.5	7.0
4	11.0	5.0	8.0	6.5	14.5	8.0	14.5	9.0	16.5	8.0	15.5	6.5
5	7.0	4.5	10.0	6.0	14.5	8.5	10.5	8.5	10.5	8.5	15.5	8.0
6	6.5	4.0	8.5	6.5	11.0	9.0	11.5	8.0	15.5	8.0	11.0	8.0
7	9.0	3.0	8.0	6.5	11.5	8.5	13.0	8.0	16.5	8.0	11.0	8.0
8	9.0	3.5	8.0	6.0	10.5	8.5	14.5	8.5	17.0	8.0	13.5	6.5
9	9.5	6.0	7.0	5.0	10.5	8.0	15.5	9.0	16.0	8.0	15.5	6.5
10	10.5	5.0	10.0	6.0	13.5	6.5	14.0	9.0	14.0	9.0	15.5	7.0
11	10.0	5.5	12.0	4.5	14.5	8.0	13.5	8.0	16.0	8.0	15.0	8.0
12	10.5	5.0	13.0	6.0	11.5	9.0	14.0	8.0	17.0	8.0	13.5	7.0
13	11.0	6.0	14.0	7.0	11.5	8.0	14.5	8.5	17.0	9.0	12.0	5.0
14	8.0	5.0	13.0	7.0	10.0	8.0	14.0	9.0	16.0	9.0	13.0	7.0
15	9.0	5.5	12.0	6.5	11.0	8.0	13.0	9.0	15.5	7.0	12.0	6.0
16	7.0	5.5	12.0	6.0	10.0	8.0	12.0	9.5	9.5	8.0	12.0	5.0
17	7.0	4.5	14.0	6.0	9.0	7.0	12.0	9.5	14.0	5.5	11.0	6.5
18	5.0	3.5	13.0	7.0	13.0	7.0	12.0	10.0	14.5	7.0	13.0	8.0
19	6.5	3.5	10.5	8.0	15.0	8.5	13.5	9.5	15.5	6.0	10.5	8.0
20	8.0	4.5	9.0	6.5	16.5	9.0	12.0	10.0	14.5	6.5	9.0	8.0
21	10.5	4.0	13.0	6.0	16.5	10.0	11.0	9.0	14.5	5.5	10.5	8.0
22	9.0	6.5	10.0	8.0	16.5	10.0	11.5	8.0	14.0	5.5	9.0	8.0
23	7.0	5.5	11.0	8.5	12.0	8.5	11.5	8.0	10.5	5.5	10.0	8.0
24	8.0	5.0	9.5	7.0	10.5	8.0	13.5	6.0	12.0	7.0	10.5	8.0
25	6.0	4.0	9.5	6.0	10.0	8.5	15.5	7.0	15.0	6.5	12.0	8.0
26	6.5	6.0	10.5	6.0	14.5	8.5	15.5	8.0	13.0	7.0	13.0	7.0
27	7.0	5.0	9.0	6.0	15.5	8.5	15.0	7.0	13.5	8.0	14.0	8.0
28	8.0	4.0	14.0	8.0	11.5	9.0	14.5	8.0	13.0	8.0	14.0	8.0
29	9.0	3.5	14.5	8.0	10.5	8.0	13.5	8.0	14.0	9.0	12.0	8.5
30	11.0	4.0	14.5	8.5	9.5	8.0	15.0	8.0	9.0	8.0	11.0	8.0
31	---	---	12.0	8.0	---	---	17.0	8.0	9.0	6.5	---	---
MONTH	11.0	3.0	14.5	4.5	16.5	6.5	17.0	6.0	17.0	5.5	15.5	4.5

12083400 NISQUALLY RIVER AT ELBE, WASH.

LOCATION.--Lat 46°45'47", long 122°11'27", in NW¼NW¼ sec.28, T.15 N., R.5 E., Pierce County, at State Highway 7 crossing in Elbe and at mile 51.7 (83.2 km).

DRAINAGE AREA.--22.6 mi^2 (58.5 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT.										
10...	1005	482	--	--	4.1	.7	--	--	--	7.3
26...	1020	311	7.0	1.7	4.4	.9	33	--	27	5.9
NOV.										
06...	1030	919	5.7	1.3	3.1	.8	29	0	24	4.1
20...	1045	379	7.0	1.5	4.0	.6	35	--	29	13
DEC.										
05...	1000	658	6.5	1.4	3.6	.7	31	0	25	5.7
18...	1030	1370	4.8	1.0	2.7	.6	27	0	22	3.2
JAN.										
02...	1020	1340	5.6	1.2	3.1	.6	28	--	23	2.8
29...	1035	774	5.9	1.2	3.4	1.2	31	--	25	4.2
FEB.										
14...	1150	448	6.9	1.5	4.2	1.4	26	--	21	11
26...	1100	703	6.0	1.4	3.8	.6	31	--	25	3.7
MAR.										
12...	1110	784	5.6	1.2	3.2	.5	33	--	27	2.7
26...	1040	569	6.4	1.4	3.6	.7	34	--	28	3.6
APR.										
09...	1040	481	6.5	1.5	4.0	.7	33	--	27	3.5
23...	1015	871	5.5	1.2	3.3	.7	28	--	23	3.6
MAY										
21...	1045	918	5.3	1.0	2.7	.5	26	--	21	3.3
30...	1100	868	5.0	1.0	3.0	.5	29	--	24	3.4
JUNE										
11...	1100	680	4.8	1.2	3.3	.4	31	--	25	4.0
25...	1015	1240	3.8	1.0	2.8	.6	22	--	18	5.7
JULY										
16...	1105	907	5.0	1.7	3.2	1.0	21	--	17	5.8
23...	1145	563	5.1	1.4	3.3	.7	25	--	21	5.4
AUG.										
06...	1045	777	3.9	1.5	3.3	1.1	24	--	20	5.6
20...	1010	446	5.2	1.5	4.1	.9	25	--	21	7.0
SEP.										
04...	1035	485	4.4	1.6	3.3	.9	25	--	21	6.5
17...	1015	355	4.6	1.7	3.4	1.7	30	--	25	5.9

12083400 NISQUALLY RIVER AT ELBE, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)	ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)
OCT.									
10...	1.6	.01	.00	.04	--	.01	.03	.00	--
26...	3.8	.03	--	--	--	--	.02	.00	24
NOV.									
06...	3.0	.13	.00	.05	.09	.14	.02	.00	20
20...	4.9	.04	.00	.02	.05	.07	.00	.00	24
DEC.									
05...	2.4	.11	.00	.04	.32	.36	.02	.00	22
18...	2.3	.29	.00	.01	.20	.21	.07	.00	16
JAN.									
02...	2.9	.18	.00	.11	.02	.13	.02	.00	19
29...	2.3	.16	.01	.07	.25	.32	.01	.00	20
FEB.									
14...	3.2	.07	.00	.11	.39	.50	.01	.00	23
26...	3.0	.07	.00	.03	.13	.16	.00	.00	21
MAR.									
12...	2.2	.07	.00	.03	.16	.19	.00	.00	19
26...	2.4	.05	.00	.06	.08	.14	.01	.00	22
APR.									
09...	3.4	.03	.00	.05	.07	.12	.01	.00	22
23...	1.9	.07	.00	.05	.08	.13	.01	.00	19
MAY									
21...	2.0	.09	.01	.04	.04	.08	.01	.00	17
30...	1.4	.03	.00	.02	.03	.05	.01	.00	17
JUNE									
11...	1.6	.02	.01	.08	.01	.09	.03	.02	17
25...	2.0	.03	.00	.08	.06	.14	.07	.00	14
JULY									
16...	2.9	.02	.02	.07	.01	.08	.31	.08	19
23...	2.7	.02	.02	.06	.00	.06	.13	.00	19
AUG.									
06...	2.5	.03	.01	.06	.08	.14	.34	.02	16
20...	2.9	.04	.00	.08	.06	.14	.18	.04	19
SEP.									
04...	2.2	.02	.00	.10	.00	.10	.35	.00	18
17...	2.1	.02	.00	.24	.03	.27	.10	.00	18

NISQUALLY RIVER BASIN

12083400 NISQUALLY RIVER AT ELBE, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	NON-CARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.									
10...	--	57	7.4	6.0	162	15	11.7	--	200
26...	0	66	7.6	6.3	23	2	11.6	1.3	190
NOV.									
06...	0	79	7.4	6.4	26	5	11.6	1.8	200
20...	0	65	7.5	4.8	0	4	12.9	1.8	120
DEC.									
05...	0	56	7.5	.1	4	3	13.4	1.6	100
18...	0	45	7.7	4.5	36	20	12.5	.9	800
JAN.									
02...	0	54	7.2	3.3	21	5	12.7	2.8	175
29...	0	64	7.1	3.4	15	6	12.9	3.9	<100
FEB.									
14...	2	85	6.9	3.9	12	4	13.0	5.2	<100
26...	0	67	7.4	6.6	22	4	12.3	2.0	64
MAR.									
12...	0	62	7.5	4.6	18	3	12.8	1.7	70
26...	0	73	7.4	4.6	87	3	12.7	2.2	<40
APR.									
09...	0	71	7.4	8.1	16	4	12.0	2.1	31
23...	0	63	7.5	7.0	19	4	12.1	1.4	80
MAY									
21...	0	55	7.4	8.4	22	6	11.6	1.7	80
30...	0	59	7.5	11.5	18	4	10.8	1.5	77
JUNE									
11...	0	60	7.5	11.0	13	14	11.7	1.6	125
25...	0	50	7.4	10.4	44	50	11.3	1.4	>1600
JULY									
16...	2	48	7.5	13.1	139	280	10.2	1.1	<400
23...	0	53	7.7	10.5	45	53	19.0	.8	<400
AUG.									
06...	0	42	7.3	9.8	23	400	13.5	1.9	410
20...	0	66	7.5	9.3	31	70	11.6	1.3	280
SEP.									
04...	0	56	7.5	9.2	40	85	11.5	1.3	770
17...	0	62	7.5	8.8	40	55	11.8	1.5	440

12086500 NISQUALLY RIVER AT LA GRANDE, WASH.

LOCATION.--Lat 46°50'37", long 122°19'46", in SE¼NW¼ sec.29, T.16 N., R.4 E., Pierce County, at county road bridge, 0.2 mi (0.3 km) upstream from Mashel River, 0.6 mi (1.0 km) downstream from gaging station, 0.7 mi (1.1 km) northwest of La Grande and at mile 39.8 (64.0 km).

DRAINAGE AREA.--292 mi^2 (756 km^2), at gaging station.

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973.
Water temperatures: October 1965 to September 1973.

EXTREMES.--1972-73:
Water temperatures: Maximum, 14.5°C Sept. 21-24, 26, 27; minimum, 2.0°C Jan. 23, 24, 27-31.

Period of record:
Water temperatures: Maximum, 14.5°C Sept. 21-24, 26, 27, 1973; minimum, 2.0°C Jan. 19-21, 1972, Jan. 23, 24, 27-31, 1973.

REMARKS.--Temperature recorder at gaging station 0.6 mi (1.0 km) upstream from sampling site. Dissolved oxygen, pH, turbidity, color, specific conductance, and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
OCT.								
10...	0930	1360	.05	.02	.14	.07	.21	.06
26...	0945	992	.05	--	--	--	--	.06
NOV.								
06...	1000	1370	.05	.02	--	--	.15	.08
20...	1015	1330	.03	.01	.01	.04	.05	.04
DEC.								
05...	0925	2220	.09	.02	.04	.53	.57	.06
18...	1000	2350	.09	.00	.00	.06	.06	.05
JAN.								
02...	0950	2230	.20	.00	.14	.01	.15	.08
29...	1005	2260	.17	.02	.14	.17	.31	.04
FEB.								
14...	1030	2120	.18	.01	.31	.79	1.1	.04
26...	1035	2170	.16	.00	.04	.11	.15	.01
MAR.								
12...	1045	1750	.16	.00	.06	.08	.14	.02
26...	0955	780	.07	.02	.12	.06	.18	.05
APR.								
09...	0945	597	.11	.00	.08	.07	.15	.02
23...	0945	507	.09	.01	.08	.05	.13	.02
MAY								
21...	1010	597	.09	.00	.06	.02	.08	.09
30...	1015	472	.09	.00	.03	.05	.08	.01
JUNE								
11...	0950	480	.06	.00	.02	.06	.08	.01
25...	0950	416	.03	.01	.01	.07	.08	.00
JULY								
16...	1030	543	.03	.00	.04	.07	.11	.00
23...	1100	1050	.02	.00	.01	.04	.05	.00
AUG.								
06...	1005	1460	.03	.00	.04	.01	.05	.01
20...	0950	760	.03	.00	.08	.02	.10	.02
SEP.								
04...	0955	850	.03	.00	.20	.24	.44	.03
17...	0940	884	.05	.01	.10	.12	.22	.05

12086500 NISQUALLY RIVER AT LA GRANDE, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)
OCT.								
10...	.00	50	7.1	10.6	64	15	10.4	<200
26...	.00	47	7.4	10.6	39	4	10.8	70
NOV.								
06...	.00	45	7.3	9.9	44	30	11.1	40
20...	.00	46	7.3	8.4	2	25	12.3	50
DEC.								
05...	.00	51	7.3	4.5	2	25	11.9	70
18...	.00	47	7.3	6.0	44	20	12.3	60
JAN.								
02...	.00	44	7.2	4.8	63	39	12.6	300
29...	.00	49	7.0	3.9	42	27	13.2	<40
FEB.								
14...	.01	58	7.1	4.1	36	15	13.2	<40
26...	.00	59	7.0	4.7	30	18	13.0	<40
MAR.								
12...	.01	56	7.2	4.7	38	8	12.7	<20
26...	.00	66	7.2	5.7	36	10	11.4	33
APR.								
09...	.00	60	7.2	7.4	32	4	12.5	110
23...	.01	62	7.2	7.0	29	4	13.2	90
MAY								
21...	.00	59	7.2	7.5	17	3	12.8	150
30...	.00	65	7.6	9.2	31	3	12.7	90
JUNE								
11...	.00	65	7.3	8.8	9	3	11.0	40
25...	.00	65	7.4	9.0	15	3	11.7	80
JULY								
16...	.00	65	7.4	11.3	17	2	11.2	>80
23...	.00	71	7.3	12.0	27	3	12.0	440
AUG.								
06...	.00	60	6.9	11.0	14	40	11.8	90
20...	.01	61	7.3	12.5	17	12	12.8	620
SEP.								
04...	.00	56	7.3	12.6	28	20	10.2	250
17...	.00	56	7.3	13.6	33	33	10.3	180

12086500 NISQUALLY RIVER AT LA GRANDE, WASH.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.0	10.5	11.0	10.5	8.0	7.0	5.0	4.5	3.0	3.0	4.0	3.5
2	11.0	10.5	10.5	10.5	7.0	7.0	4.5	4.5	3.0	3.0	4.0	4.0
3	11.0	11.0	10.5	10.5	7.0	7.0	4.5	4.5	3.0	3.0	4.0	4.0
4	11.0	11.0	10.5	10.5	7.0	7.0	4.5	4.5	3.0	3.0	4.0	4.0
5	11.0	10.5	10.5	10.5	7.0	7.0	4.5	4.5	3.5	3.0	4.0	4.0
6	11.0	10.5	10.5	10.0	7.0	7.0	4.5	4.5	3.5	3.0	4.5	4.0
7	11.0	10.5	10.0	10.0	7.0	7.0	4.5	4.5	3.0	3.0	4.5	4.5
8	11.0	10.5	10.0	10.0	7.0	6.5	4.5	4.0	3.0	3.0	4.5	4.5
9	11.0	10.5	10.0	10.0	6.5	6.5	4.5	4.0	3.0	3.0	4.5	4.5
10	11.0	11.0	10.0	10.0	6.5	6.0	4.0	3.5	3.0	3.0	4.5	4.5
11	11.0	11.0	10.0	10.0	6.0	5.5	3.5	3.5	3.0	3.0	4.5	4.5
12	11.0	11.0	10.0	9.5	5.5	5.5	3.5	3.5	3.0	3.0	4.5	4.5
13	11.0	10.5	9.5	9.0	5.5	5.5	3.5	3.5	3.0	3.0	4.5	4.5
14	11.0	10.5	9.0	9.0	5.5	5.5	3.5	3.5	3.0	3.0	4.5	4.5
15	11.0	10.5	9.0	9.0	5.5	5.0	3.5	3.5	3.0	3.0	4.5	4.0
16	11.0	10.5	9.0	8.5	5.0	4.5	3.5	3.5	3.0	3.0	4.5	4.0
17	11.0	10.5	8.5	8.5	4.5	4.5	3.5	3.5	3.0	3.0	4.5	4.5
18	11.0	10.5	8.5	8.5	4.5	4.5	3.5	3.0	3.5	3.0	4.5	4.0
19	11.0	10.5	8.5	8.5	4.5	4.5	3.5	3.0	3.5	3.0	4.5	4.0
20	11.0	11.0	8.5	8.0	4.5	4.5	3.5	3.0	3.5	3.0	4.0	4.0
21	11.0	10.5	8.5	8.0	4.5	4.5	3.5	3.0	3.5	3.0	4.5	4.0
22	10.5	10.5	8.5	8.0	4.5	4.5	3.5	3.0	3.5	3.0	4.5	4.5
23	11.0	10.5	8.0	8.0	4.5	4.5	3.0	2.0	3.0	3.0	4.5	4.5
24	11.0	10.5	8.0	8.0	4.5	4.5	3.0	2.0	3.0	3.0	4.5	4.0
25	11.0	11.0	8.0	8.0	4.5	4.5	3.0	3.0	3.0	3.0	4.5	4.5
26	11.0	11.0	8.0	8.0	4.5	4.0	3.0	3.0	3.0	3.0	4.5	4.5
27	11.5	11.0	8.0	8.0	5.0	4.0	3.0	2.0	3.5	3.0	4.5	4.5
28	11.5	11.0	8.0	8.0	5.0	5.0	2.0	2.0	4.0	3.5	4.5	4.5
29	11.5	11.0	8.0	8.0	5.0	5.0	2.0	2.0	---	---	4.5	4.5
30	11.5	11.0	8.0	8.0	5.0	5.0	2.0	2.0	---	---	4.5	4.5
31	11.0	11.0	---	---	5.0	5.0	3.0	2.0	---	---	4.5	4.5
MONTH	11.5	10.5	11.0	8.0	8.0	4.0	5.0	2.0	4.0	3.0	4.5	3.5

12086500 NISQUALLY RIVER AT LA GRANDE, WASH.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	4.5	4.5	6.0	5.5	8.0	6.5	9.0	8.5	11.0	10.5	13.0	12.0
2	5.0	4.5	6.0	5.5	8.0	7.0	9.0	8.5	11.0	11.0	13.0	13.0
3	5.0	4.5	6.0	5.5	8.0	7.0	9.0	8.5	11.0	11.0	13.0	13.0
4	4.5	4.5	6.0	5.5	8.0	7.0	9.0	9.0	11.0	11.0	13.0	13.0
5	4.5	4.5	6.0	6.0	8.0	7.0	9.5	9.0	11.0	11.0	13.5	13.0
6	5.0	4.5	6.0	6.0	8.0	8.0	9.5	9.0	11.0	11.0	13.5	13.5
7	5.0	4.5	6.0	6.0	8.0	8.0	9.0	9.0	11.5	11.0	13.5	13.0
8	5.0	4.5	6.0	6.0	8.0	8.0	9.5	9.0	11.5	11.0	13.5	13.5
9	5.0	4.5	6.0	6.0	8.0	8.0	9.0	9.0	11.5	11.5	13.5	13.5
10	5.0	4.5	6.0	5.5	8.0	7.0	9.5	9.0	12.0	11.5	14.0	13.5
11	5.0	4.5	6.0	5.5	8.0	7.0	9.5	9.0	12.0	11.5	14.0	13.5
12	5.5	4.5	6.5	5.5	8.0	8.0	9.5	9.0	12.0	12.0	14.0	14.0
13	5.5	4.5	6.5	5.5	8.0	8.0	9.5	9.0	13.5	12.0	14.0	14.0
14	5.5	4.5	6.5	6.0	8.0	8.0	10.0	9.0	12.0	12.0	14.0	14.0
15	5.5	5.5	6.5	6.0	8.0	8.0	10.0	9.0	12.0	12.0	14.0	14.0
16	6.0	5.5	6.5	6.0	8.0	8.0	10.0	9.5	12.0	12.0	14.0	14.0
17	5.5	5.5	6.5	6.0	8.0	8.0	10.0	9.5	12.0	12.0	14.0	14.0
18	5.5	5.5	6.5	6.0	8.5	8.0	10.0	9.5	12.0	12.0	14.0	14.0
19	6.0	5.5	6.5	6.0	8.5	8.0	10.0	9.5	12.0	12.0	14.0	14.0
20	5.5	5.0	6.5	6.0	8.5	8.0	10.0	9.5	12.0	12.0	14.0	14.0
21	6.0	5.0	6.5	5.5	8.5	8.5	10.0	9.5	12.0	12.0	14.5	14.0
22	5.5	5.0	6.0	6.0	8.5	8.5	10.0	9.5	12.0	12.0	14.5	14.0
23	5.5	5.5	6.0	6.0	9.0	8.5	10.0	9.5	12.0	12.0	14.5	14.0
24	5.5	5.5	6.0	6.0	9.0	9.0	10.0	9.5	12.0	12.0	14.5	14.0
25	6.0	5.0	6.5	6.0	9.0	9.0	10.0	9.5	12.0	12.0	14.0	14.0
26	6.0	5.0	6.0	5.5	9.0	8.5	10.0	9.5	12.0	12.0	14.5	14.0
27	6.0	5.5	6.0	6.0	9.0	8.5	10.0	9.5	12.0	12.0	14.5	14.0
28	6.0	5.5	6.0	5.5	9.0	8.5	10.5	9.5	12.0	12.0	14.0	14.0
29	6.0	5.0	6.5	6.0	9.0	9.0	10.5	10.0	12.0	12.0	14.0	14.0
30	6.0	5.5	6.5	6.0	9.0	9.0	10.5	10.0	12.0	12.0	14.0	14.0
31	---	---	6.5	6.5	---	---	11.0	10.0	13.0	12.0	---	---
MONTH	6.0	4.5	6.5	5.5	9.0	6.5	11.0	8.5	13.5	10.5	14.5	12.0

12088400 NISQUALLY RIVER ABOVE POWELL CREEK NEAR MCKENNA, WASH.

LOCATION.--Lat 46°51'04", long 122°26'03", in SE¼SW¼ sec.21, T.16 N., R.3 E., Thurston County, at logging road bridge 400 ft (122 m) upstream from gage, 0.7 mi (1.1 km) upstream from Powell Creek, 8.5 mi (13.7 km) southeast of McKenna and at mile 32.6 (52.5 km).

DRAINAGE AREA.--431 mi^2 (1,116 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)
OCT.										
10...	0900	1460	.03	.01	.15	.05	.01	48	7.3	10.2
26...	0935	1070	.05	--	--	.06	.00	51	7.4	10.5
NOV.										
06...	0935	1700	.08	.02	--	.07	.00	67	7.4	9.5
20...	0930	1500	.03	.01	.01	.04	.00	51	7.3	7.6
DEC.										
05...	0855	2580	.12	.01	.01	.05	.00	50	7.3	4.3
18...	0930	3480	.26	.00	.00	.06	.00	40	7.3	5.5
JAN.										
02...	0930	2900	.27	.01	.19	.07	.06	45	7.1	4.8
29...	0935	2580	.18	.01	.10	.03	.00	59	7.0	4.2
FEB.										
14...	0955	2400	.19	.01	.10	.02	.00	50	7.3	4.8
26...	0955	2460	.16	.00	.06	.01	.00	53	7.3	5.9
MAR.										
12...	1005	1580	.17	.01	.07	.02	.00	56	7.5	5.2
26...	0915	1040	.11	.00	.11	.02	.00	62	7.2	5.5
APR.										
09...	0915	718	.10	.01	.09	.01	.00	62	7.3	7.7
23...	0920	830	.09	.00	.06	.02	.01	57	7.2	7.4
MAY										
21...	0935	666	.08	.00	.06	.01	.00	69	7.2	8.8
30...	0915	672	.05	.00	.06	.01	.00	67	7.6	10.3
JUNE										
11...	0905	570	.05	.00	.04	.02	.02	68	7.3	9.8
25...	0910	618	.03	.00	.06	.02	.01	70	7.4	11.8
JULY										
16...	0840	576	.02	.00	.02	.00	.00	66	7.4	11.5
23...	1000	588	.02	.00	.01	.01	.00	78	7.6	11.0
AUG.										
06...	0925	910	.02	.00	.03	.01	.00	60	7.5	12.2
20...	0905	718	.02	.00	.09	.02	.00	95	7.4	11.6
SEP.										
04...	0900	704	.05	.02	.18	.03	.00	75	7.3	12.4
17...	0900	795	.04	.01	.16	.06	.00	60	7.4	13.4

12088400 NISQUALLY RIVER ABOVE POWELL CREEK NEAR MCKENNA, WASH.--Continued

CHEMICAL ANALYSES, OCTOBER 1972 TO SEPTEMBER 1973

DATE	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
OCT.									
10...	59	20	10.5	250	0	9	8	.7	10
26...	41	4	10.5	500	0	16	8	.2	20
NOV.									
06...	61	20	11.0	600	0	10	2	1.8	10
20...	2	25	11.9	330	0	19	1	5.0	30
DEC.									
05...	4	20	11.7	130	0	0	3	.1	0
18...	90	20	12.3	800	0	1	1	.3	110
JAN.									
02...	67	34	12.3	400	0	18	1	.1	420
29...	45	25	12.8	<100	10	7	4	.0	40
FEB.									
14...	37	11	13.0	<100	0	7	2	.0	0
26...	33	24	12.9	<40	10	8	4	.0	20
MAR.									
12...	44	8	12.7	40	0	10	9	.0	160
26...	22	12	12.1	84	0	25	6	.1	20
APR.									
09...	37	7	11.9	58	0	10	3	.0	0
23...	40	4	12.3	100	0	17	4	.3	10
MAY									
21...	25	3	12.2	180	0	21	14	.1	50
30...	14	3	11.6	110	0	6	3	.4	30
JUNE									
11...	13	3	11.5	140	0	7	4	.1	50
25...	26	4	11.5	400	0	4	3	.1	10
JULY									
16...	19	2	9.9	300	0	6	0	.1	10
23...	26	3	11.2	250	0	10	2	.0	10
AUG.									
06...	15	40	10.2	390	0	10	4	.0	20
20...	20	10	11.8	580	0	11	1	.0	30
SEP.									
04...	30	17	10.0	275	0	3	3	.0	10
17...	33	35	9.9	320	0	2	4	.0	20

12090240 NISQUALLY RIVER AT NISQUALLY, WASH.

LOCATION.--Lat 47°03'43", long 122°41'42", in SW¼NW¼ sec.9, T.18 N., R.1 E., Pierce County, at old Pacific Highway bridge, 0.3 mi (0.5 km) northeast of Nisqually.

DRAINAGE AREA.--712 mi^2 (1,844 km^2).

PERIOD OF RECORD.--Chemical analyses: February 1968 (partial-record station), October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
OCT.							
10...	1800	1500	.07	.00	.08	.06	.00
24...	1115	1200	.06	.01	.17	.05	.00
NOV.							
07...	1020	1800	.10	.02	.19	.05	.00
21...	0920	1580	--	--	--	--	--
DEC.							
04...	0930	2210	.19	.01	.02	.06	.00
19...	0900	4140	.34	.01	.25	.12	.01
JAN.							
03...	0925	3360	.33	.01	.14	.06	.00
30...	0910	2910	.25	.01	.11	.03	.00
FEB.							
13...	0900	2750	.24	.00	.09	.02	.00
27...	1015	2530	.21	.00	.06	.01	.01
MAR.							
13...	0900	2660	.20	.00	.06	.02	.01
27...	0915	1050	.20	.00	.07	.02	.12
APR.							
10...	0845	800	.13	.00	.06	.02	.01
24...	0910	900	.18	.00	.09	.02	.02
MAY							
22...	0905	928	.11	.00	.06	.02	.01
31...	1035	888	.19	.00	.05	.01	.01
JUNE							
12...	0850	852	.10	.00	.05	.01	.01
26...	0855	950	.09	.00	.05	.05	.00
JULY							
17...	0925	840	.09	.00	.05	.02	.01
24...	0920	1050	.05	.00	.03	.02	.00
AUG.							
07...	0850	1280	.05	.00	.10	.01	.00
21...	0845	907	.06	.00	.07	.02	.01
SEP.							
05...	0850	1000	.07	.00	.15	.03	.00
18...	0855	758	.10	.00	.06	.05	.01

12090240 NISQUALLY RIVER AT NISQUALLY, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.							
10...	60	7.3	10.5	51	20	10.6	350
24...	60	7.6	10.6	33	25	10.7	370
NOV.							
07...	56	7.5	9.0	63	25	10.2	500
21...	102	8.5	6.9	2	2	9.6	100
DEC.							
04...	51	7.5	3.1	4	15	12.4	500
19...	52	7.3	6.8	67	50	12.0	>1600
JAN.							
03...	73	7.2	4.7	35	60	12.3	2000
30...	109	7.3	5.1	22	2	12.6	500
FEB.							
13...	61	7.1	4.0	44	9	12.6	130
27...	130	8.2	5.9	11	4	12.3	140
MAR.							
13...	119	8.9	6.0	3	2	13.4	100
27...	105	7.5	7.0	50	3	11.7	100
APR.							
10...	111	9.2	9.4	27	1	11.3	<40
24...	106	7.9	9.1	45	4	11.4	110
MAY							
22...	95	8.4	11.7	20	2	10.2	110
31...	85	7.9	13.0	17	2	10.2	68
JUNE							
12...	89	7.7	13.7	29	2	10.2	500
26...	83	7.3	10.3	34	3	13.0	550
JULY							
17...	90	7.5	15.9	18	1	8.8	250
24...	73	7.5	10.7	8	4	12.0	>800
AUG.							
07...	75	7.3	12.5	2	3	10.5	340
21...	83	7.5	13.4	19	8	11.2	480
SEP.							
05...	87	7.6	13.8	55	12	9.1	340
18...	73	7.5	13.4	28	24	10.1	2400

12090288 LOUISE LAKE NEAR STEILACOOM, WASH.

LOCATION.--Lat 47°09'36", long 122°34'00", in NW¼SW¼ sec.4, T.19 N., R.2 E., Pierce County, 1.6 mi (2.6 km) southeast of Steilacoom.

DRAINAGE AREA.--0.34 mi^2 (0.88 km^2).

PERIOD OF RECORD.--Chemical analyses: February 1973 to August 1973 (discontinued).

REMARKS.--Descriptive location given above is for southernmost point of lake. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, FEBRUARY 1973 TO AUGUST 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB.											
16...	1405	3.0	5.0	.1	140	20	10	2.3	4.7	.9	23
16...	1410	30	4.7	.1	40	10	--	--	--	--	26
APR.											
23...	1525	3.0	13.2	.1	30	10	--	--	--	--	23
23...	1530	29	8.4	.2	40	40	--	--	--	--	23
JUNE											
18...	1450	3.0	18.0	.0	50	10	--	--	--	--	30
18...	1500	28	13.2	.0	170	120	--	--	--	--	31
AUG.											
30...	1000	3.0	21.4	.4	50	40	5.8	1.7	5.1	.7	28
30...	1010	26	21.0	.4	70	45	--	--	--	--	28

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO-PHOSPHORUS (P) (MG/L)
FEB.											
16...	0	19	9.7	4.9	.09	.00	.06	.30	.36	.01	.00
16...	--	21	--	--	.09	.00	.11	.25	.36	.01	.00
APR.											
23...	--	19	--	--	.00	.00	.06	.24	.30	.01	.00
23...	--	19	--	--	.05	.00	.10	.20	.30	.00	.00
JUNE											
18...	--	25	--	--	.04	.00	.03	.12	.15	.00	.00
18...	--	25	--	--	.01	.00	.14	.03	.17	.02	.00
AUG.											
30...	--	23	9.0	3.6	.01	.00	.11	.51	.62	.00	.00
30...	--	23	--	--	.01	.00	.11	.38	.49	.00	.00

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	CARBON DIOXIDE (CO2) (MG/L)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
FEB.											
16...	44	.06	0	34	16	65	7.2	0	2.3	4.8	5.0
16...	--	--	--	--	--	66	--	0	--	--	--
APR.											
23...	--	--	--	--	--	72	--	10	--	1.6	4.5
23...	--	--	--	--	--	71	--	10	--	--	--
JUNE											
18...	--	--	--	--	--	74	--	5	--	.9	5.0
18...	--	--	--	--	--	74	--	10	--	--	--
AUG.											
30...	40	.05	0	21	0	72	--	5	--	1.3	4.0
30...	--	--	--	--	--	74	--	5	--	--	--

12090450 SPANAWAY LAKE NEAR SPANAWAY, WASH.

LOCATION.--Lat 47°07'11", long 122°26'45", in NW¼ sec.20, T.19 N., R.3 E., Pierce County, 1.2 mi (1.9 km) northwest of Spanaway.

DRAINAGE AREA.--17.2 mi^2 (44.5 km^2).

PERIOD OF RECORD.--Chemical analyses: February 1973 to August 1973 (discontinued).

REMARKS.--Descriptive location given above is for lake outlet. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, FEBRUARY 1973 TO AUGUST 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
FEB.											
15...	1350	3.0	5.6	12	220	30	8.9	3.1	4.5	.9	41
15...	1400	23	5.0	12	230	20	--	--	--	--	45
APR.											
23...	1030	3.0	12.8	11	120	10	--	--	--	--	44
23...	1040	22	9.2	13	590	70	--	--	--	--	43
JUNE											
18...	0930	3.0	16.3	6.2	210	0	--	--	--	--	51
18...	0940	21	11.0	18	4900	530	--	--	--	--	64
AUG.											
28...	1215	3.0	17.9	9.3	250	45	10	3.3	4.8	.9	50
28...	1225	23	11.4	27	23000	1000	--	--	--	--	86

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
FEB.											
15...	0	34	5.0	5.4	.60	.00	.13	.57	.70	.02	.00
15...	--	37	--	--	.60	.00	.12	.31	.43	.02	.00
APR.											
23...	--	36	--	--	.49	.00	.13	.24	.37	.01	.00
23...	--	35	--	--	.37	.00	.31	.10	.41	.04	.01
JUNE											
18...	--	42	--	--	.04	.00	.11	.08	.19	.02	.00
18...	--	52	--	--	.01	.01	1.1	.00	1.1	.25	.07
AUG.											
28...	--	41	4.7	5.4	.02	.00	.14	.10	.24	.02	.00
28...	--	71	--	--	.06	.00	3.1	.20	3.3	.85	.02

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	CARBON DIOXIDE (CO2) (MG/L)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
FEB.											
15...	60	.08	4	35	1	94	7.3	15	3.3	9.5	7.0
15...	--	--	--	--	--	95	--	15	--	--	--
APR.											
23...	--	--	--	--	--	91	--	20	--	2.7	3.5
23...	--	--	--	--	--	94	--	40	--	--	--
JUNE											
18...	--	--	--	--	--	93	--	5	--	7.3	7.5
18...	--	--	--	--	--	116	--	50	--	--	--
AUG.											
28...	63	.09	1	39	0	106	--	7	--	5.8	4.0
28...	--	--	--	--	--	199	--	375	--	--	--

12091600 CHAMBERS CREEK NEAR STEILACOOM, WASH.

LOCATION.--Lat 47°11'32", long 122°34'20", in SE¼NE¼ sec.29, T.20 N., R.2 E., at road crossing at mouth, 1.8 mi (2.9 km) northeast of Steilacoom.

DRAINAGE AREA.--108 mi^2 (280 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1962 to September 1970, October 1971 to September 1973 (discontinued). Records prior to October 1972, published as 12091500, "below Leach Creek near Steilacoom."

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
OCT.								
10...	1530	30	.65	.00	.32	.42	.74	.03
24...	1200	30	1.1	.02	.14	.28	.42	.03
NOV.								
07...	1125	49	1.2	.01	.16	.37	.53	.07
21...	1000	34	1.3	.02	.14	.22	.36	.05
DEC.								
04...	1000	30	1.3	.01	.12	.29	.41	.10
19...	0945	205	1.1	.00	.22	.31	.53	.09
JAN.								
03...	1000	155	1.4	.02	.13	.26	.39	.06
30...	0945	150	1.6	.01	.16	.24	.40	.04
FEB.								
13...	0940	118	1.5	.01	.11	.48	.59	.04
27...	1100	118	1.3	.01	.14	--	--	.05
MAR.								
13...	0930	110	1.3	.01	.12	.28	.40	.04
27...	0955	99	1.4	.01	.10	.05	.15	.05
APR.								
10...	0915	96	1.2	.01	.12	.15	.27	.03
24...	1005	76	1.4	.01	.12	.11	.23	.06
MAY								
22...	0955	65	1.1	.01	.17	.02	.19	.06
31...	1110	58	1.3	.01	.09	.22	.31	.05
JUNE								
12...	0935	68	1.3	.01	.08	.04	.12	.04
26...	0935	56	1.3	.02	.01	.27	.28	.06
JULY								
17...	1005	51	1.3	.01	.10	.21	.31	.06
24...	1005	45	1.4	.01	.09	.12	.21	.06
AUG.								
07...	0930	47	1.1	.01	.23	.24	.47	.08
21...	0915	46	1.3	.01	.09	.19	.28	.04
SEP.								
05...	0930	30	1.2	.01	.11	--	--	.05
18...	0930	33	1.4	.06	.13	.40	.53	.06

12091600 CHAMBERS CREEK NEAR STEILACOOM, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)
OCT.								
10...	.02	150	7.5	10.7	27	1	9.6	2000
24...	.00	145	7.8	10.1	29	4	9.6	600
NOV.								
07...	.02	150	7.7	10.3	27	7	10.8	2200
21...	.03	150	7.6	7.5	4	2	10.8	1500
DEC.								
04...	.03	140	7.5	3.8	0	3	11.5	600
19...	.03	110	7.3	7.6	77	10	10.8	<1600
JAN.								
03...	.02	150	7.4	6.0	30	4	11.5	1000
30...	.02	150	7.4	6.9	26	3	10.9	300
FEB.								
13...	.00	170	7.0	6.9	21	3	11.3	700
27...	.01	150	7.4	9.4	36	4	10.8	1000
MAR.								
13...	.01	112	7.1	8.5	3	3	10.7	400
27...	.04	150	7.5	10.1	12	2	10.6	250
APR.								
10...	.01	160	7.8	11.5	20	1	9.7	500
24...	.03	170	7.6	11.1	21	4	10.0	1600
MAY								
22...	.03	150	7.8	13.6	17	3	9.3	400
31...	.03	117	7.8	14.5	50	1	8.9	1200
JUNE								
12...	.04	160	7.8	14.5	24	2	9.0	4500
26...	.03	160	7.2	15.5	32	2	9.7	5500
JULY								
17...	.04	180	7.6	16.4	14	2	8.0	500
24...	.00	170	7.7	14.0	25	2	14.5	<1600
AUG.								
07...	.02	18	7.5	15.5	22	3	9.7	4600
21...	.03	180	7.7	14.0	15	3	11.0	2400
SEP.								
05...	.02	250	7.8	13.8	18	2	9.1	1400
18...	.03	170	7.8	13.8	14	2	9.2	3300

12097600 WHITE RIVER BELOW TWIN CREEK NEAR GREENWATER, WASH.

LOCATION.--Lat 47°09'53", long 121°44'37", in SE¼NE¼ sec.2, T.19 N., R.8 E., Pierce County, at logging road bridge, 4.1 mi (6.6 km) west of Greenwater.

DRAINAGE AREA.--About 325 mi² (842 km²).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
OCT.							
10...	1245	550	.01	.00	.04	.03	.01
26...	1335	405	.03	--	--	.00	.00
NOV.							
06...	1400	505	.04	.00	.12	.01	.00
20...	1340	376	.01	.00	.02	.01	.00
DEC.							
05...	1345	592	.05	.00	.02	.21	.07
18...	1330	736	.06	.00	.00	.03	.00
JAN.							
02...	1255	1020	.07	.00	.04	.01	.00
29...	1330	659	.02	.01	.06	.00	.00
FEB.							
14...	1320	460	.01	.00	.13	.01	.00
26...	1340	507	.04	.00	.03	.00	.00
MAR.							
12...	1425	515	.02	.00	.03	.01	.01
26...	1400	465	.01	.00	.03	.08	.00
APR.							
09...	1345	448	.03	.00	.05	.00	.00
23...	1300	628	.02	.00	.05	.01	.01
MAY							
21...	1425	1340	.02	.00	.08	.03	.01
30...	1555	1280	.01	.00	.03	.02	.00
JUNE							
11...	1450	1010	.00	.01	.10	.02	.02
25...	1430	1460	.01	.00	.07	.17	.00
JULY							
16...	1450	920	.01	.01	.14	.31	.04
23...	1650	667	.00	.02	.17	.08	.01
AUG.							
06...	1500	776	.02	.00	.05	.23	.01
20...	1400	498	--	--	--	--	--
SEP.							
04...	1410	489	.01	.00	.15	.11	.02
17...	1350	400	.01	.00	.08	.11	.02

12097600 WHITE RIVER BELOW TWIN CREEK NEAR GREENWATER, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.							
10...	60	7.5	6.4	26	10	11.3	<200
26...	75	7.6	6.5	23	1	11.3	110
NOV.							
06...	79	7.0	6.1	18	2	11.6	110
20...	60	7.5	4.2	0	2	12.7	50
DEC.							
05...	65	7.6	.0	0	10	14.0	<40
18...	49	7.9	3.5	44	10	13.0	120
JAN.							
02...	44	7.2	3.4	20	3	12.7	<200
29...	66	7.3	2.6	12	3	13.1	<40
FEB.							
14...	81	6.9	4.0	8	4	12.8	<40
26...	72	7.5	6.3	13	2	12.1	<40
MAR.							
12...	69	7.4	4.0	14	1	12.9	<40
26...	73	7.6	6.0	13	1	11.9	<20
APR.							
09...	98	7.3	10.9	13	3	10.5	<20
23...	67	7.4	7.7	14	3	11.9	25
MAY							
21...	52	7.6	10.5	14	8	10.8	25
30...	55	7.6	14.0	14	5	10.4	20
JUNE							
11...	59	7.6	13.0	15	20	10.2	30
25...	49	7.5	11.3	37	60	11.3	225
JULY							
16...	55	7.6	18.0	5	150	9.3	100
23...	64	7.7	12.1	13	50	16.0	<200
AUG.							
06...	55	7.5	14.5	85	160	10.4	<100
20...	64	8.2	13.3	24	50	11.3	<100
SEP.							
04...	73	7.7	13.4	23	40	14.7	150
17...	73	7.6	10.5	35	55	10.2	170

12098600 WHITE RIVER BELOW RED CREEK NEAR BUCKLEY, WASH.

LOCATION.--Lat 47°09'46", long 121°58'31", in NE¼SE¼ sec.1, T.19 N., R.6 E., King County, on right bank 1.3 mi (2.1 km) downstream from Red Creek, 1.7 mi (2.7 km) downstream from gaging station and 2.5 mi (4.0 km) east of Buckley.

DRAINAGE AREA.--407 mi^2 (1,054 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
OCT.							
26...	1300	550	.06	--	--	.01	.00
NOV.							
06...	1320	866	.25	.01	.14	.09	.00
20...	1305	474	.05	.00	.02	.01	.00
DEC.							
05...	1310	714	.15	.00	.03	.03	.00
18...	1300	1450	.19	.00	.01	.17	.00
JAN.							
02...	1225	2670	.16	.00	.03	.02	.00
29...	1255	908	.10	.01	.02	.01	.00
FEB.							
14...	1250	595	.10	.00	.03	.01	.00
26...	1310	720	.08	.00	.02	.01	.00
MAR.							
12...	1355	830	.08	.00	.03	.03	.01
26...	1315	685	.08	.00	.04	.03	.03
APR.							
09...	1215	585	.04	.00	.06	.01	.01
23...	1225	1160	.04	.01	.04	.02	.01
MAY							
21...	1400	1720	.03	.00	.07	.03	.01
30...	1515	1550	.03	.00	.04	.02	.01
JUNE							
11...	1420	1400	.02	.00	.09	.03	.02
25...	1355	1570	.04	.02	.11	.09	.00
JULY							
16...	1415	96	.16	.01	.12	.18	.01
23...	1555	2280	.02	.02	.18	.16	.01
AUG.							
06...	1420	938	.06	.00	.03	.11	.02
20...	1315	555	.04	.01	.16	.07	.01
SEP.							
04...	1335	510	.05	.00	.07	.06	.02
17...	1310	432	.05	.00	.06	.07	.02

12098600 WHITE RIVER BELOW RED CREEK NEAR BUCKLEY, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.							
26...	72	7.7	7.0	26	1	11.7	330
NOV.							
06...	78	7.2	6.8	31	3	11.8	190
20...	66	7.5	5.4	0	1	13.1	100
DEC.							
05...	54	7.4	.0	0	4	14.3	80
18...	44	7.2	4.0	75	25	13.0	400
JAN.							
02...	44	7.3	4.0	28	4	13.5	150
29...	68	7.2	3.4	17	3	13.4	50
FEB.							
14...	74	7.4	4.6	13	2	13.1	<40
26...	71	7.4	6.5	18	2	12.2	40
MAR.							
12...	70	7.5	5.6	27	4	12.5	40
26...	74	7.5	6.7	15	7	12.3	68
APR.							
09...	76	7.6	9.9	18	2	11.7	<40
23...	61	7.4	7.5	26	7	11.9	130
MAY							
21...	53	7.4	10.6	17	7	21.1	130
30...	62	7.5	10.2	128	3	11.4	96
JUNE							
11...	57	7.6	11.1	15	19	11.7	100
25...	54	7.3	10.9	66	80	11.1	200
JULY							
16...	87	7.6	17.9	75	100	9.2	150
23...	66	7.5	13.5	42	88	19.0	5200
AUG.							
06...	60	7.3	12.2	101	250	10.6	440
20...	68	7.6	13.6	20	35	11.3	180
SEP.							
04...	90	7.8	13.5	23	33	12.6	200
17...	80	7.6	11.7	26	35	10.8	220

12099600 BOISE CREEK AT BUCKLEY, WASH.

LOCATION.--Lat 47°10'34", long 122°01'02", in NE¼SE¼ sec.34, T.20 N., R.6 E., Pierce County, at county road bridge 600 ft (183 m) upstream from mouth and 0.8 mi (1.3 km) northeast of Buckley.

DRAINAGE AREA.--15.4 mi² (39.9 km²).

PERIOD OF RECORD.--Chemical analyses: January 1963 to September 1964, October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
OCT.							
10...	1200	--	.49	.06	1.1	.58	.49
26...	1215	17	.46	--	--	.35	.35
NOV.							
06...	1300	--	.49	.05	.76	.28	.22
20...	1200	17	.66	.06	1.2	.87	.86
DEC.							
05...	1120	15	.92	.02	.29	.15	.09
18...	1150	20	1.5	.01	.58	.28	.10
JAN.							
02...	1135	18	.95	.01	.34	.15	.06
29...	1225	21	.75	.02	.74	.28	.16
FEB.							
14...	1200	20	.66	.02	.92	.26	.15
26...	1220	22	.58	.02	1.5	.30	.23
MAR.							
12...	1235	22	.70	.03	.99	.28	.17
26...	1130	22	.72	.02	.93	.41	.28
APR.							
09...	1100	22	.23	.04	1.7	.74	.25
23...	1130	22	.50	.01	.52	.20	.12
MAY							
21...	1215	23	.45	.04	1.7	.41	.40
30...	1330	23	.44	.04	1.1	.53	.53
JUNE							
11...	1305	24	.57	.06	3.4	.80	.75
25...	1200	27	.51	.01	.55	.33	.11
JULY							
16...	1225	23	.53	.08	3.0	.83	.66
23...	1345	22	.44	.08	3.6	1.1	.82
AUG.							
06...	1250	22	.43	.07	1.5	.56	.40
20...	1040	5.1	.37	.05	2.9	.75	.75
SEP.							
04...	1205	6.6	.45	.10	3.8	1.4	.95
17...	1145	6.8	.49	.13	2.8	.95	.86

12099600 BOISE CREEK AT BUCKLEY, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.							
10...	94	7.4	8.5	36	10	10.8	4000
26...	84	7.6	9.0	152	1	10.5	4000
NOV.							
06...	77	7.3	9.3	353	2	10.0	11000
20...	107	7.6	7.3	8	5	11.5	<200
DEC.							
05...	63	7.4	.2	10	10	13.5	2400
18...	84	7.1	5.4	131	15	12.2	16000
JAN.							
02...	68	7.0	5.5	62	20	12.4	<4000
29...	90	7.2	3.5	46	6	12.6	200
FEB.							
14...	96	7.5	7.0	95	9	12.0	8000
26...	95	7.5	9.3	128	15	10.9	3000
MAR.							
12...	95	7.6	6.7	110	7	11.7	5000
26...	93	7.6	7.4	4	6	11.7	3500
APR.							
09...	100	7.7	11.6	66	6	11.0	1100
23...	63	7.4	8.8	78	10	12.2	10000
MAY							
21...	88	7.3	12.5	76	8	10.6	9000
30...	103	9.0	15.8	39	10	9.3	11000
JUNE							
11...	120	7.8	15.4	41	6	10.1	≤1000
25...	85	7.4	14.2	158	20	9.7	>4000
JULY							
16...	116	7.8	17.8	138	20	8.5	9500
23...	140	7.8	15.0	75	6	20.0	<200
AUG.							
06...	170	7.6	15.5	60	6	9.8	110
20...	330	7.5	13.2	53	7	9.8	570
SEP.							
04...	280	7.7	13.9	79	10	9.9	800
17...	190	7.7	13.1	69	6	9.5	280

12100050 WHITE RIVER BELOW BOISE CREEK, NEAR BUCKLEY, WASH.

LOCATION.--Lat 47°11'01", long 122°03'38", in NE¼NE¼ sec.32, T.20 N., R.6 E., King County, on right bank 2 mi (3.2 km) northwest of Buckley.

DRAINAGE AREA.--About 430 mi² (1,110 km²).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
OCT.							
26...	1145	52	.14	--	--	.05	.04
NOV.							
06...	1230	60	.28	.02	.24	.14	.09
20...	1235	47	.33	.01	.08	.10	.09
DEC.							
05...	1225	47	.69	.01	.21	.11	.07
18...	1220	168	.56	.00	.13	.12	.02
JAN.							
02...	1200	181	.20	.00	.10	.03	.01
29...	1200	66	.65	.01	.22	.09	.05
FEB.							
14...	1230	60	.38	.01	.23	.09	.05
26...	1245	94	.39	.01	.20	.11	.07
MAR.							
12...	1255	71	.54	.01	.22	.10	.08
26...	1200	88	.41	.01	.15	.11	.08
APR.							
09...	1120	88	.30	.01	.09	.10	.08
23...	1200	83	.36	.01	.13	.10	.07
MAY							
21...	1300	76	.10	.01	.09	.07	.05
30...	1425	61	.15	.01	.06	.14	.12
JUNE							
11...	1340	60	.15	.01	.11	.13	.12
25...	1225	115	.24	.02	.18	.14	.02
JULY							
16...	1250	111	.07	.02	.09	.15	.07
23...	1430	61	.17	.03	.24	.19	.01
AUG.							
06...	1335	47	.18	.02	.10	.14	.09
20...	1210	10	.13	.02	.15	.16	.13
SEP.							
04...	1305	60	.17	.02	.15	.19	.15
17...	1215	58	.22	.03	.12	.17	.12

12100050 WHITE RIVER BELOW BOISE CREEK, NEAR BUCKLEY, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.							
26...	73	7.9	8.1	48	1	12.3	800
NOV.							
06...	77	7.4	8.8	150	6	10.9	4000
20...	96	8.0	7.2	0	2	13.5	<100
DEC.							
05...	87	7.5	.0	0	5	14.4	1600
18...	58	7.9	4.3	102	20	12.5	8000
JAN.							
02...	49	6.9	4.9	24	4	12.7	4000
29...	102	7.2	5.6	21	4	12.2	350
FEB.							
14...	104	7.5	7.0	33	4	13.0	400
26...	99	7.5	8.1	37	3	12.0	380
MAR.							
12...	100	7.6	7.2	49	3	12.4	640
26...	103	7.7	8.0	18	3	12.5	300
APR.							
09...	98	7.8	12.5	27	2	12.3	<100
23...	80	7.6	9.4	47	4	12.2	400
MAY							
21...	65	7.4	14.6	21	5	11.2	1700
30...	98	7.3	18.1	22	3	12.8	10000
JUNE							
11...	90	9.0	18.5	38	10	13.7	5200
25...	76	7.7	13.6	76	40	11.1	22500
JULY							
16...	65	7.7	18.2	90	125	9.3	2000
23...	100	7.6	17.5	52	45	16.0	2400
AUG.							
06...	88	7.9	15.7	48	65	12.6	590
20...	99	8.7	15.3	22	24	12.8	280
SEP.							
04...	99	8.6	16.8	32	20	10.3	470
17...	120	8.3	13.1	32	26	12.3	780

12100496 WHITE RIVER NEAR AUBURN, WASH.

LOCATION.--Lat 47°15'58", long 122°13'43", in SE¼NE¼ sec.36, T.21 N., R.4 E., King County, at railroad bridge, 2.5 mi (4.0 km) south of Auburn, and at mile 6.3 (10.1 km).

DRAINAGE AREA.--464 mi^2 (1,202 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1961 to September 1971, October 1972 to September 1973 (discontinued). Record prior to October 1972, published as 12100500, "near Sumner."

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)
OCT.							
10...	1425	.03	.01	.07	.06	.04	97
24...	1350	.03	.00	.11	.03	.00	97
NOV.							
07...	1245	.29	.01	.05	.07	.06	104
21...	1145	.11	.00	.04	.04	.00	53
DEC.							
04...	1130	.94	.02	.22	.10	.04	100
19...	1115	.63	.01	.15	.23	.02	47
JAN.							
03...	1135	.45	.00	.20	.23	.00	58
30...	1200	.71	.01	.21	.04	.02	64
FEB.							
13...	1115	.69	.01	.13	.04	.01	120
27...	1300	.72	.02	.31	.12	.06	60
MAR.							
13...	1130	.61	.01	.07	.04	.02	68
27...	1200	.38	.01	.07	.05	.04	74
APR.							
10...	1100	.03	.01	.09	.03	.01	83
24...	1130	.47	.01	.09	.07	.06	63
MAY							
22...	1215	.03	.00	.13	.04	.02	76
31...	1330	.03	.00	.06	.05	.02	113
JUNE							
12...	1130	.02	.01	.11	.04	.04	115
26...	1145	.34	.00	.15	.15	.06	93
JULY							
17...	1255	.14	.02	.04	.20	.06	130
24...	1145	.05	.02	.18	.12	.03	98
AUG.							
07...	1100	.04	.01	.25	.08	.03	118
21...	1030	.03	.00	.11	.07	.05	130
SEP.							
05...	1055	.06	.00	.14	.08	.07	140
18...	1115	.00	.01	.05	.08	.06	114

12100496 WHITE RIVER NEAR AUBURN, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.						
10...	8.9	10.5	36	5	12.3	300
24...	9.0	9.7	73	3	13.6	<200
NOV.						
07...	8.8	9.0	16	10	12.9	250
21...	7.4	5.5	2	20	15.1	440
DEC.						
04...	7.5	2.0	4	5	14.7	>800
19...	7.3	5.4	186	40	12.8	1400
JAN.						
03...	7.2	3.4	60	26	13.3	400
30...	7.2	5.4	41	9	11.3	<100
FEB.						
13...	7.3	6.0	24	3	13.1	150
27...	7.2	9.7	40	6	13.1	1600
MAR.						
13...	7.4	7.8	50	7	14.5	200
27...	7.6	9.7	16	6	13.8	150
APR.						
10...	7.5	13.5	35	4	13.7	300
24...	7.5	10.4	40	5	11.9	100
MAY						
22...	7.7	14.5	22	3	11.6	260
31...	8.5	16.5	39	1	10.9	500
JUNE						
12...	8.1	16.0	34	3	10.4	1700
26...	7.7	15.5	102	25	13.2	>8000
JULY						
17...	8.6	21.3	41	30	10.2	<400
24...	9.1	15.6	19	38	12.6	720
AUG.						
07...	8.7	15.7	38	25	11.5	2200
21...	8.3	14.7	23	12	12.2	740
SEP.						
05...	8.3	16.4	50	9	10.1	1100
18...	8.5	15.4	34	12	11.2	1650

12102750 NORTH LAKE NEAR FEDERAL WAY, WASH.

LOCATION.--Lat 47°18'00", long 122°17'30", in NE¼NE¼ sec.21, T.21 N. R.4 E., King County, 1.8 mi (2.9 km) southeast of Federal Way.

DRAINAGE AREA.--0.76 mi^2 (1.97 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for the southernmost point of lake. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, MARCH 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
MAR.											
05...	1450	3.0	7.7	2.2	60	20	4.9	1.4	3.6	1.0	18
05...	1500	31	5.9	2.7	150	30	--	--	--	--	18
MAY											
11...	1350	3.0	15.0	.2	50	0	--	--	--	--	14
11...	1400	32	7.2	2.1	680	110	--	--	--	--	19
JULY											
05...	1415	3.0	20.7	.3	80	10	--	--	--	--	20
05...	1420	32	7.7	2.9	1400	160	--	--	--	--	30
SEP.											
13...	1020	3.0	18.5	.7	80	10	4.7	1.5	3.8	.8	22
13...	1030	28	18.5	2.8	1900	210	--	--	--	--	30

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
MAR.											
05...	0	15	8.9	4.2	.25	.00	.18	.56	.74	.02	.00
05...	--	15	--	--	.27	.00	.30	.44	.74	.02	.00
MAY											
11...	--	11	--	--	.02	.00	.21	.27	.48	.01	.00
11...	--	16	--	--	.05	.01	.82	.38	1.2	.03	.00
JULY											
05...	--	16	--	--	.01	.00	.08	.07	.15	.01	.00
05...	--	25	--	--	.00	.01	1.7	.10	1.8	.09	.04
SEP.											
13...	--	18	8.3	4.1	.01	.00	.10	1.0	1.1	.01	.00
13...	--	25	--	--	.00	.00	1.8	.20	2.0	.05	.01

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	CARBON DIOXIDE (CO2) (MG/L)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
MAR.											
05...	35	.05	1	18	3	52	6.7	45	5.7	18	9.5
05...	--	--	--	--	--	54	--	45	--	--	--
MAY											
11...	--	--	--	--	--	55	--	35	--	3.3	8.5
11...	--	--	--	--	--	62	--	50	--	--	--
JULY											
05...	--	--	--	--	--	55	--	25	--	2.7	8.5
05...	--	--	--	--	--	66	--	55	--	--	--
SEP.											
13...	35	.05	0	18	0	59	--	25	--	3.1	9.0
13...	--	--	--	--	--	80	--	55	--	--	--

12102760 KILLARNEY LAKE NEAR ALGONA, WASH.

LOCATION.--Lat 47°17'01", long 122°17'36", in NE¼NE¼ sec.28, T.21 N., R.4 E., King County, 2.0 mi (3.2 km) northwest of Algona.

DRAINAGE AREA.--0.35 mi^2 (0.91 km^2).

PERIOD OF RECORD.--Chemical analyses: February 1973 to August 1973 (discontinued).

REMARKS.--Descriptive location given above is for lake outlet. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, FEBRUARY 1973 TO AUGUST 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
MAR.											
09...	0915	3.0	8.2	.7	70	20	4.5	1.2	3.9	.8	14
09...	0920	8.0	8.1	.7	70	20	--	--	--	--	10
09...	1030	3.0	8.7	2.1	100	30	4.6	1.3	4.2	.8	14
09...	1035	8.0	7.8	2.1	100	40	--	--	--	--	14
MAY											
11...	1030	3.0	14.0	.2	80	20	--	--	--	--	9
11...	1040	7.0	13.9	.1	90	20	--	--	--	--	11
11...	1145	3.0	14.0	.3	170	10	--	--	--	--	13
11...	1155	7.0	13.3	.2	30	0	--	--	--	--	10
JULY											
05...	1055	3.0	19.9	.2	160	30	--	--	--	--	16
05...	1100	7.0	19.3	.2	190	40	--	--	--	--	16
05...	1200	3.0	19.8	.2	220	20	--	--	--	--	16
05...	1205	7.0	17.0	.3	310	20	--	--	--	--	16
AUG.											
29...	1045	3.0	17.4	.1	280	50	4.0	1.4	4.2	.6	15
29...	1055	6.0	17.2	.1	380	30	--	--	--	--	16
29...	1330	3.0	16.9	.2	190	40	4.1	1.4	4.2	.5	11
29...	1340	6.0	16.3	.1	310	10	--	--	--	--	14

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
MAR.											
09...	0	11	7.1	7.0	.16	.00	.12	.41	.53	.01	.00
09...	--	8	--	--	.16	.00	.12	.32	.44	.01	.00
09...	0	11	5.4	9.9	.06	.00	.17	.33	.50	.01	.00
09...	--	11	--	--	.06	.00	.18	.37	.55	.01	.00
MAY											
11...	--	7	--	--	.02	.00	.10	.38	.48	.02	.00
11...	--	9	--	--	.02	.00	.11	.29	.40	.03	.00
11...	--	11	--	--	.02	.00	.17	.33	.50	.02	.00
11...	--	8	--	--	.02	.00	.20	.29	.49	.03	.00
JULY											
05...	--	13	--	--	--	--	--	--	--	--	--
05...	--	13	--	--	.01	.00	.09	.04	.13	.01	.00
05...	--	13	--	--	.01	.00	.15	.02	.17	.02	.00
05...	--	13	--	--	.01	.00	.14	.04	.18	.03	.00
AUG.											
29...	--	12	6.7	8.1	.01	.00	.15	.29	.44	.01	.00
29...	--	13	--	--	.01	.00	.20	.35	.55	.01	.00
29...	--	9	6.4	9.2	.01	.00	.18	.50	.68	.01	.00
29...	--	11	--	--	.01	.00	.19	.23	.42	.01	.00

12102760 KILLARNEY LAKE NEAR ALGONA, WASH.--Continued

CHEMICAL ANALYSES, FEBRUARY 1973 TO AUGUST 1973

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	SUS-PENDED SOLIDS (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	COLOR (PLAT-INUM-COBALT UNITS)	CARBON DIOXIDE (CO2) (MG/L)	CHLORO-PHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
MAR.											
09...	32	.04	5	16	5	57	6.7	10	4.5	4.5	6.5
09...	--	--	--	--	--	56	--	10	--	--	--
09...	35	.05	6	17	5	62	6.3	20	11	11	8.5
09...	--	--	--	--	--	61	--	20	--	--	--
MAY											
11...	--	--	--	--	--	56	--	20	--	1.0	7.5
11...	--	--	--	--	--	56	--	25	--	--	--
11...	--	--	--	--	--	58	--	35	--	1.7	8.0
11...	--	--	--	--	--	58	--	30	--	--	--
JULY											
05...	--	--	--	--	--	53	--	15	--	1.4	7.0
05...	--	--	--	--	--	54	--	15	--	--	--
05...	--	--	--	--	--	55	--	30	--	2.1	9.0
05...	--	--	--	--	--	56	--	30	--	--	--
AUG.											
29...	33	.04	0	16	3	56	--	20	--	6.0	6.5
29...	--	--	--	--	--	56	--	25	--	--	--
29...	32	.04	7	16	7	59	--	25	--	3.9	8.0
29...	--	--	--	--	--	59	--	25	--	--	--

12111000 SAWYER LAKE NEAR BLACK DIAMOND, WASH.

LOCATION.--Lat 47°20'03", long 122°02'24", in NE¼SE¼ sec.4, T.21 N., R.6 E., King County, 2.5 mi (4.0 km) northwest of Black Diamond.

DRAINAGE AREA.--13.0 mi² (33.7 km²).

PERIOD OF RECORD.--Chemical analyses: March 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for lake outlet. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, MARCH 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
MAR.											
06...	1120	3.0	6.8	8.6	60	10	12	5.0	8.6	.7	61
06...	1130	54	4.8	10	140	60	--	--	--	--	80
MAY											
10...	1425	3.0	13.0	6.7	30	0	--	--	--	--	64
10...	1435	54	6.5	11	150	110	--	--	--	--	62
JUNE											
25...	1440	3.0	19.8	5.3	20	10	--	--	--	--	71
25...	1450	54	6.9	12	370	250	--	--	--	--	72
SEP.											
13...	1450	3.0	18.9	6.9	40	0	9.4	5.3	11	.6	73
13...	1500	50	7.0	12	900	510	--	--	--	--	75

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
MAR.											
06...	0	50	17	2.5	.65	.00	.05	.25	.30	.01	.00
06...	--	66	--	--	.60	.00	.12	.19	.31	.01	.00
MAY											
10...	--	52	--	--	.41	.00	.05	.22	.27	.00	.00
10...	--	51	--	--	.58	.00	.08	.20	.28	.17	.00
JUNE											
25...	--	58	--	--	.11	.00	.07	.06	.13	.02	.00
25...	--	59	--	--	.46	.00	.06	.01	.07	.02	.00
SEP.											
13...	--	60	15	2.2	.01	.00	.06	.25	.31	.00	.00
13...	--	62	--	--	.07	.00	.34	.03	.37	.04	.02

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	CARBON DIOXIDE (CO2) (MG/L)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
MAR.											
06...	85	.12	1	51	1	125	7.5	10	3.1	2.2	3.5
06...	--	--	--	--	--	150	--	15	--	--	--
MAY											
10...	--	--	--	--	--	138	--	30	--	1.3	3.0
10...	--	--	--	--	--	131	--	35	--	--	--
JUNE											
25...	--	--	--	--	--	139	--	10	--	2.1	6.0
25...	--	--	--	--	--	134	--	15	--	--	--
SEP.											
13...	86	.12	1	45	0	143	--	5	--	2.5	4.5
13...	--	--	--	--	--	130	--	35	--	--	--

12113000 GREEN RIVER NEAR AUBURN, WASH.

LOCATION.--Lat 47°18'45", long 122°12'10", in NW¼NW¼ sec.17, T.21 N., R.5 E., King County, temperature recorder at gaging station on left bank, 1.2 mi (1.9 km) east of Auburn, 1.8 mi (2.9 km) downstream from Big Soos Creek, and at mile 32.0 (51.4 km).

DRAINAGE AREA.--399 mi^2 (1,033 km^2), excluding 3.67 mi^2 (9.51 km^2) in the vicinity of Youngs Lake.

PERIOD OF RECORD.--Chemical analyses: July 1959 to September 1970.
Water temperatures: March 1952 to September 1973.

EXTREMES.--1972-73:
Water temperatures: Maximum recorded, 19.0°C June 22, 23; minimum, 1.0°C Jan. 9, 10.

Period of record:
Water temperatures: Maximum, 24.0°C July 28, 1958; minimum, 0.5°C Feb. 16, 17, 1956, Dec. 18-21, 1964.

REMARKS.--Temperature recorder not operating July 10 to Sept. 3 (no range in temperature obtained).

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.0	11.0	8.5	8.0	6.5	6.0	4.5	4.5	4.5	4.5	6.0	6.0
2	12.0	11.5	9.0	8.5	6.5	6.0	4.5	4.5	4.5	4.5	6.0	6.0
3	11.5	11.0	9.0	9.0	6.0	4.5	4.5	4.0	4.5	4.5	6.0	5.5
4	11.5	10.0	9.0	9.0	4.5	3.5	4.0	3.5	4.5	4.0	6.0	5.5
5	11.0	9.0	9.0	9.0	3.5	3.0	3.5	3.0	4.0	3.5	6.5	6.0
6	11.0	9.0	9.0	8.5	3.0	2.0	3.0	2.0	4.0	3.5	7.0	6.0
7	11.5	9.5	8.5	8.5	2.0	1.5	2.0	2.0	4.0	3.5	6.5	6.5
8	11.5	10.0	8.5	8.5	1.5	1.5	2.0	1.5	4.0	3.5	7.0	6.5
9	11.5	11.0	8.5	8.5	1.5	1.5	1.5	1.0	4.0	4.0	7.0	7.0
10	11.5	10.5	8.5	8.0	1.5	1.5	1.5	1.0	4.0	4.0	7.0	6.5
11	10.5	9.5	8.0	6.5	1.5	1.5	2.0	1.5	5.0	4.0	6.5	6.5
12	10.5	9.0	6.5	6.5	1.5	1.5	3.0	2.0	5.5	5.0	6.5	6.0
13	10.5	9.5	6.5	6.5	1.5	1.5	3.5	3.0	5.5	5.5	6.0	5.5
14	11.5	10.5	6.5	6.5	2.0	1.5	3.5	3.5	5.5	5.0	6.0	5.0
15	11.5	9.5	6.5	6.0	2.0	2.0	3.5	3.5	5.5	5.0	8.0	5.5
16	10.5	9.5	6.5	6.0	3.0	2.0	4.0	3.5	6.0	5.5	7.0	7.0
17	10.5	9.5	6.0	6.0	2.0	2.0	4.0	4.0	6.0	6.0	7.0	6.0
18	10.5	9.5	6.5	6.0	3.0	2.0	4.0	4.0	6.0	6.0	6.0	6.0
19	9.5	9.5	6.5	6.5	3.5	3.0	4.0	4.0	6.0	5.0	6.5	6.0
20	9.5	9.5	6.5	6.0	4.0	3.5	4.0	4.0	5.5	5.0	6.5	6.5
21	10.0	9.5	6.0	5.5	4.0	4.0	4.0	4.0	5.0	5.0	7.0	6.5
22	10.5	10.0	6.0	6.0	4.0	4.0	4.0	4.0	5.5	5.0	7.0	7.0
23	10.5	10.5	6.5	6.0	4.5	4.0	4.0	4.0	6.0	5.5	8.0	6.0
24	10.5	9.5	6.5	6.0	4.5	4.5	4.0	4.0	6.0	5.5	8.5	6.5
25	9.5	8.5	6.5	6.5	4.5	4.5	4.0	4.0	6.5	6.0	8.5	8.0
26	9.0	8.5	6.5	6.5	5.0	4.5	4.0	3.5	6.5	6.5	8.5	8.0
27	9.0	8.5	6.5	6.0	5.0	4.5	3.5	3.5	6.5	6.5	8.0	8.0
28	9.0	8.5	6.0	6.0	4.5	4.5	3.5	3.5	6.5	6.0	8.0	6.5
29	9.0	8.5	6.0	6.0	4.5	4.5	4.0	3.5	---	---	7.0	6.5
30	8.5	7.0	6.0	6.0	4.5	4.5	4.0	4.0	---	---	8.0	7.0
31	8.0	7.0	---	---	4.5	4.5	4.5	4.0	---	---	8.5	7.0
NTH	12.0	7.0	9.0	5.5	6.5	1.5	4.5	1.0	6.5	3.5	8.5	5.0

DUWAMISH RIVER BASIN

12113000 GREEN RIVER NEAR AUBURN, WASH.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.5	7.0	12.0	8.5	14.5	12.0	14.5	11.0	---	---	---	---
2	8.5	6.5	11.5	10.0	13.5	11.5	15.0	12.0	---	---	---	---
3	9.5	6.5	10.5	10.0	15.0	13.0	16.5	13.0	---	---	---	---
4	10.5	8.0	10.5	10.0	16.0	12.0	16.0	14.0	---	---	16.5	15.5
5	10.0	9.0	10.0	9.5	16.5	13.5	15.0	13.0	---	---	17.0	15.5
6	9.0	8.5	10.0	9.0	16.5	14.5	14.5	12.0	---	---	17.0	16.0
7	9.5	7.0	10.0	9.5	14.5	13.5	16.0	14.0	---	---	16.0	15.0
8	9.5	8.0	9.5	9.0	14.5	13.0	16.0	14.0	---	---	15.5	14.0
9	11.0	9.0	9.5	8.5	14.5	13.0	18.5	14.0	---	---	16.5	14.0
10	11.0	9.0	10.0	8.0	15.5	12.0	---	---	---	---	17.0	15.0
11	11.5	9.5	11.0	8.0	15.5	13.0	---	---	---	---	17.0	15.5
12	11.5	9.5	13.0	9.0	15.0	14.0	---	---	---	---	16.0	15.0
13	11.5	9.5	14.5	10.0	14.0	13.0	---	---	---	---	16.0	14.0
14	10.5	8.5	15.0	11.5	14.0	12.0	---	---	---	---	14.5	14.5
15	9.5	9.0	14.0	12.0	13.0	11.5	---	---	---	---	15.0	13.5
16	9.5	9.0	14.0	11.0	13.0	12.0	---	---	---	---	14.5	13.0
17	9.0	8.0	14.5	11.0	12.0	11.0	---	---	---	---	14.5	13.5
18	8.0	8.0	13.5	12.0	13.5	10.5	---	---	---	---	14.0	14.0
19	8.0	7.0	12.0	11.0	16.0	12.0	---	---	---	---	14.0	13.5
20	8.5	6.5	11.5	10.0	17.0	14.0	---	---	---	---	13.5	13.5
21	10.0	6.5	13.0	9.5	18.0	15.0	---	---	---	---	13.5	13.5
22	9.5	9.5	12.0	10.5	19.0	15.5	---	---	---	---	13.5	13.5
23	9.5	8.5	12.0	11.5	19.0	15.0	---	---	---	---	13.5	13.5
24	9.0	8.0	11.5	11.5	15.0	14.0	---	---	---	---	13.5	13.0
25	10.0	7.0	13.0	10.0	14.0	13.5	---	---	---	---	14.0	13.5
26	10.5	8.5	13.0	10.5	14.5	13.5	---	---	---	---	14.5	13.0
27	10.0	9.0	13.0	10.5	16.0	13.5	---	---	---	---	14.5	13.5
28	9.0	7.0	15.0	10.5	16.0	14.0	---	---	---	---	15.0	14.0
29	9.5	6.5	16.0	12.0	14.0	12.0	---	---	---	---	15.0	14.0
30	11.0	7.0	16.5	14.0	12.0	11.5	---	---	---	---	14.0	14.0
31	---	---	16.5	13.5	---	---	---	---	---	---	---	---
MONTH	11.5	6.5	16.5	8.0	19.0	10.5	---	---	---	---	17.0	13.0

12117490 CEDAR RIVER ABOVE ROCK CREEK NEAR LANDSBURG, WASH.

LOCATION.--Lat 47°23'28", long 121°55'08", in NW¼SE¼ sec.16, T.22 N., R.7 E., King County, at Trude Road bridge, 1.8 mi (2.9 km) upstream from gaging station and 2.6 mi (4.2 km) northeast of Landsburg.

DRAINAGE AREA.--116 mi^2 (300 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
OCT.							
10...	1400	447	.10	.00	.00	.00	.00
26...	1500	358	.15	--	--	.12	.00
NOV.							
06...	1555	406	.07	.00	.01	.01	.00
20...	1500	371	.12	.00	.02	.00	.00
DEC.							
18...	1435	556	.23	.00	.02	.02	.00
JAN.							
02...	1345	1200	.16	.00	.03	.01	.00
29...	1425	1070	.12	.00	.36	.00	.00
FEB.							
14...	1430	599	.14	.00	.02	.00	.00
26...	1445	572	.12	.00	.01	.00	.00
MAR.							
12...	1525	475	.16	.00	.01	.01	.00
26...	1500	371	.16	.00	.02	.01	.01
APR.							
09...	1400	384	.09	.00	.04	.00	.00
23...	1415	379	.17	.00	.04	.01	.00
MAY							
21...	1545	471	.10	.00	.02	.01	.00
30...	1720	371	.11	.00	.02	.00	.00
JUNE							
11...	1625	401	.10	.00	.02	.01	.01
25...	1540	442	.13	.00	.01	.02	.00
JULY							
16...	1555	316	.12	.00	.02	.02	.01
23...	1830	312	.12	.00	.02	.01	.01
AUG.							
07...	1210	302	.12	.00	.06	.00	.00
21...	1120	388	.11	.00	.03	.00	.00
SEP.							
05...	1220	288	.13	.00	.08	.01	.00
18...	1210	267	.13	.00	.02	.01	.00

12117490 CEDAR RIVER ABOVE ROCK CREEK NEAR LANDSBURG, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.							
10...	47	7.5	10.0	10	1	11.0	230
26...	58	7.6	9.0	11	1	11.0	220
NOV.							
06...	53	7.6	9.0	5	9	11.0	<100
20...	46	7.6	7.7	0	1	11.9	80
DEC.							
18...	61	7.2	5.7	14	5	12.4	150
JAN.							
02...	39	7.2	4.8	16	2	13.0	150
29...	45	7.3	4.0	13	2	13.2	<40
FEB.							
14...	55	7.5	6.3	9	1	12.4	<40
26...	55	7.5	7.2	10	2	11.5	40
MAR.							
12...	63	7.5	7.0	7	1	12.9	40
26...	68	7.5	8.0	18	2	11.7	72
APR.							
09...	63	7.5	11.4	11	1	11.5	35
23...	65	7.5	8.8	14	2	11.6	75
MAY							
21...	56	7.4	14.5	5	1	10.6	50
30...	70	7.5	12.7	31	1	10.8	82
JUNE							
11...	66	7.7	12.9	5	1	10.6	75
25...	65	7.7	10.6	13	1	11.4	275
JULY							
16...	72	7.8	13.7	73	0	10.1	30
23...	77	7.8	10.5	9	2	17.0	120
AUG.							
07...	71	7.7	10.5	4	1	10.8	380
21...	88	7.8	11.8	5	1	11.5	480
SEP.							
05...	80	7.7	11.8	0	1	11.2	180
18...	69	7.7	10.0	5	1	11.4	1060

12117500 CEDAR RIVER NEAR LANDSBURG, WASH.

LOCATION.--Lat 47°23'38", long 121°57'12", on west line in NW¼SW¼ sec.17, T.22 N., R.7 E., King County temperature recorder at gaging station on left bank, 1.8 mi (2.9 km) upstream from intake of Seattle water-supply system near Landsburg, 4.0 mi (6.4 km) east of Maple Valley, 5.9 mi (9.5 km) downstream from Taylor Creek and at mile 23.4 (37.7 km).

DRAINAGE AREA.--122 mi^2 (316 km^2), includes Rock Creek drainage upstream from Walsh Lake Diversion.

PERIOD OF RECORD.--Chemical analyses: July 1959 to July 1961.
Water temperatures: August 1953 to September 1973.

EXTREMES.--1972-73:
Water temperatures: Maximum, 13.5°C July 9, 13-19, 27, 28; minimum, 2.0°C Jan. 9, 10.

Period of record:
Water temperatures: Maximum, 19.5°C July 27, 28, 1960, July 13, 1961; minimum, 2.0°C on several days during winter of 1956, 1957, 1960, 1971, and 1973.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.0	10.5	9.0	9.0	8.0	8.0	4.5	4.5	3.0	3.0	4.0	4.0
2	11.5	10.5	9.0	9.0	8.0	7.0	4.5	4.5	3.0	3.0	4.5	4.0
3	11.0	11.0	9.0	9.0	7.0	6.0	4.5	4.5	3.0	3.0	4.5	4.0
4	11.0	10.5	9.0	9.0	6.0	5.5	4.5	4.0	3.0	3.0	4.5	4.5
5	10.5	10.0	9.0	9.0	5.5	5.0	4.5	4.0	3.5	3.0	4.5	4.5
6	10.5	10.0	9.0	9.0	5.0	4.5	4.0	4.0	3.5	3.5	4.5	4.0
7	10.5	10.0	9.0	9.0	4.5	3.5	4.0	3.0	3.5	3.5	4.5	4.5
8	10.5	10.0	9.0	9.0	4.0	3.5	3.0	3.0	3.5	3.5	5.5	4.5
9	10.5	10.5	9.0	9.0	4.0	4.0	3.0	2.0	3.5	3.5	5.0	4.5
10	10.5	10.0	9.0	9.0	4.0	4.0	3.0	2.0	3.5	3.5	4.5	4.0
11	10.5	10.0	9.0	9.0	4.0	3.5	3.5	3.0	4.0	3.5	4.0	4.0
12	10.5	10.0	9.0	9.0	4.5	4.0	3.5	3.0	4.0	3.5	4.0	4.0
13	10.5	10.0	9.0	9.0	4.5	4.5	3.0	3.0	4.0	4.0	4.0	4.0
14	10.0	10.0	9.0	9.0	4.5	4.5	3.5	3.0	4.0	4.0	4.0	4.0
15	10.0	10.0	9.0	9.0	4.5	4.5	3.5	3.5	4.0	4.0	4.5	4.0
16	10.0	10.0	9.0	8.5	4.5	4.5	3.5	3.5	4.0	4.0	4.0	4.0
17	10.0	10.0	8.5	8.5	4.5	4.5	3.5	3.5	4.0	3.5	4.0	4.0
18	10.0	10.0	8.5	8.5	5.0	4.5	3.5	3.5	3.5	3.5	4.0	4.0
19	10.0	10.0	8.5	8.5	5.0	4.5	3.5	3.5	3.5	3.5	4.5	4.0
20	10.0	10.0	8.5	8.5	4.5	4.5	3.5	3.5	3.5	3.5	6.5	4.0
21	10.0	10.0	8.5	8.5	5.0	4.5	3.5	3.5	3.5	3.5	6.5	6.0
22	10.0	10.0	8.5	8.5	5.0	5.0	3.5	3.5	3.5	3.5	6.5	6.5
23	10.0	10.0	8.5	8.5	5.0	5.0	3.5	3.5	3.5	3.5	7.0	6.0
24	10.0	9.5	8.5	8.5	5.0	5.0	3.5	3.5	4.0	3.5	8.0	6.0
25	9.5	9.0	8.5	8.5	5.0	5.0	3.5	3.5	4.0	4.0	7.0	6.5
26	9.5	9.0	8.5	8.0	5.0	5.0	3.5	3.0	4.0	4.0	7.0	6.5
27	9.5	9.0	8.0	7.0	5.0	4.5	3.0	3.0	4.0	4.0	7.0	6.5
28	9.5	9.0	7.0	7.0	4.5	4.5	3.0	3.0	4.0	4.0	7.0	6.5
29	9.0	9.0	7.0	7.0	4.5	4.5	3.0	3.0	---	---	7.0	6.5
30	9.0	8.5	8.0	7.0	4.5	4.5	3.0	3.0	---	---	7.0	7.0
31	9.0	8.5	---	---	4.5	4.5	3.0	3.0	---	---	7.0	6.5
ONTH	11.5	8.5	9.0	7.0	8.0	3.5	4.5	2.0	4.0	3.0	8.0	4.0

12117500 CEDAR RIVER NEAR LANDSBURG, WASH.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	6.5	6.5	10.0	8.0	10.0	10.0	12.0	10.5	13.0	11.0	10.0	9.0
2	7.0	6.0	9.5	8.5	10.5	9.5	13.0	10.5	13.0	10.5	10.0	9.0
3	8.0	6.0	8.5	8.5	11.0	9.5	13.0	10.5	13.0	11.0	10.0	9.0
4	8.5	6.5	8.5	8.5	12.0	9.5	12.0	11.0	11.5	11.0	10.0	9.0
5	8.0	7.0	8.5	8.5	12.0	10.0	11.5	11.0	11.0	11.0	11.0	9.5
6	7.0	7.0	8.5	8.5	11.5	10.5	11.5	11.0	11.5	11.0	10.5	10.0
7	8.0	6.5	8.5	8.5	10.5	10.5	12.0	11.0	12.0	11.0	10.0	10.0
8	8.0	6.5	8.5	8.0	11.0	10.5	12.0	11.0	13.0	10.5	10.0	9.0
9	8.5	7.0	8.5	8.0	10.5	10.0	13.5	10.5	12.0	11.0	10.5	9.5
10	8.5	7.0	9.0	8.0	11.5	10.0	12.0	11.0	11.5	11.0	10.5	9.5
11	9.0	8.0	10.0	7.0	12.0	10.0	13.0	11.0	12.0	10.5	10.5	9.5
12	9.0	8.0	10.5	8.5	11.0	10.5	13.0	10.5	12.0	10.0	10.0	10.0
13	9.0	8.0	11.0	9.0	11.0	10.5	13.5	11.0	12.0	11.0	10.0	9.5
14	8.5	7.0	11.5	9.5	10.5	10.5	13.5	11.0	11.0	10.5	10.0	9.5
15	8.5	8.0	10.5	9.5	10.5	10.0	13.5	11.0	10.5	10.5	10.0	9.5
16	8.0	8.0	11.0	9.0	10.5	10.0	13.5	11.0	10.5	10.0	10.0	9.5
17	8.0	7.0	11.5	9.5	10.0	10.0	13.5	11.0	11.0	9.5	10.0	9.0
18	8.0	7.0	10.5	10.0	11.0	10.0	13.5	11.0	11.0	10.0	9.5	9.5
19	8.0	7.0	10.0	9.5	12.0	10.0	13.5	11.0	11.0	10.0	9.5	9.5
20	8.0	7.0	10.0	9.0	13.0	10.0	11.5	11.0	11.0	10.0	9.5	9.5
21	9.0	7.0	11.0	9.0	12.0	10.5	11.0	10.5	12.0	10.5	10.0	9.5
22	9.0	8.0	10.0	9.5	13.0	10.5	10.5	10.5	12.0	11.0	10.0	9.5
23	8.0	8.0	10.0	9.5	11.5	10.5	11.0	10.5	11.5	11.0	9.5	9.5
24	8.0	8.0	9.5	9.5	10.5	10.5	12.0	10.0	11.5	10.5	9.5	9.5
25	9.0	7.0	10.0	9.0	11.0	10.5	13.0	10.5	12.0	10.5	10.0	9.5
26	9.0	8.0	9.5	9.0	11.0	11.0	13.0	10.5	12.0	11.0	9.5	9.0
27	8.5	7.0	9.0	8.5	13.0	11.0	13.5	11.0	12.0	11.5	9.5	9.0
28	8.0	7.0	11.0	8.5	11.5	11.0	13.5	11.0	11.5	11.5	10.0	9.5
29	8.0	6.5	13.0	9.5	11.0	10.5	12.0	11.0	11.5	11.0	10.0	9.5
30	9.5	7.0	12.0	10.5	11.0	10.5	13.0	11.0	11.0	10.0	10.0	9.0
31	---	---	11.0	10.0	---	---	13.0	11.0	10.0	9.5	---	---
MONTH	9.5	6.0	13.0	7.0	13.0	9.5	13.5	10.0	13.0	9.5	11.0	9.0

12118510 CEDAR RIVER AT MAPLE VALLEY, WASH.

LOCATION.--Lat 47°24'22", long 122°02'18", in NE¼SE¼ sec.9, T.22 N., R.6 E., King County, at State Highway 169 bridge at Maple Valley.

DRAINAGE AREA.--151 mi^2 (391 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES. WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
OCT.							
10...	1440	440	.16	.00	.09	.03	.00
24...	1500	350	.15	.00	.11	.02	.00
NOV.							
06...	1500	350	.24	.00	.09	.01	.00
20...	1535	290	.17	.00	.06	.01	.00
DEC.							
05...	1500	350	.22	.00	.07	.02	.00
18...	1505	540	.35	.00	.07	.02	.00
JAN.							
02...	1420	1100	.26	.00	.04	.01	.00
29...	1510	1050	.28	.00	.06	.03	.00
FEB.							
14...	1515	530	.20	.00	.12	.01	.00
26...	1525	550	.18	.00	.04	.00	.00
MAR.							
12...	1600	450	.24	.00	.03	.01	.00
26...	1535	360	.21	.00	.06	.00	.00
APR.							
09...	1435	320	.14	.01	.03	.01	.00
23...	1440	278	.20	.01	.07	.01	.01
MAY							
21...	1430	235	.15	.00	.09	.02	.00
30...	1745	250	.15	.00	.03	.01	.00
JUNE							
11...	1700	240	.12	.00	.02	.02	.00
25...	1610	350	.15	.01	.02	.02	.00
JULY							
16...	1625	110	.15	.01	.04	.02	.01
23...	1910	101	.15	.00	.02	.01	.00
AUG.							
07...	1255	108	.11	.00	.07	.00	.00
21...	1155	212	.11	.00	.03	.00	.00
SEP.							
05...	1300	118	.14	.00	.08	.01	.00
18...	1300	155	.16	.02	.07	.01	.00

12118510 CEDAR RIVER AT MAPLE VALLEY, WASH.--Continued

CHEMICAL ANALYSES. WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.							
10...	56	7.4	8.8	13	1	10.8	1 000
24...	47	7.4	9.5	10	5	11.1	220
NOV.							
06...	78	7.2	8.6	15	2	11.0	150
20...	56	7.4	7.5	2	1	12.0	400
DEC.							
05...	47	7.5	1.2	0	3	13.0	400
18...	52	7.3	5.6	79	6	12.4	300
JAN.							
02...	49	7.6	5.0	15	2	12.6	225
29...	50	7.2	4.4	16	3	13.0	150
FEB.							
14...	64	7.4	6.3	10	4	12.5	<100
26...	63	7.4	7.5	13	3	11.8	100
MAR.							
12...	69	7.5	6.8	11	3	12.2	90
26...	75	7.4	8.8	25	2	11.7	100
APR.							
09...	72	7.6	12.2	11	1	10.1	84
23...	72	7.5	9.5	18	2	11.5	200
MAY							
21...	64	7.6	14.5	7	1	10.2	350
30...	71	7.5	15.1	18	1	10.2	110
JUNE							
11...	73	7.7	15.5	0	1	10.3	1 040
25...	72	7.7	12.7	15	2	11.7	<200
JULY							
16...	85	7.9	20.4	10	3	9.1	200
23...	90	7.8	13.5	18	1	15.2	250
AUG.							
07...	85	8.4	14.5	8	1	7.4	580
21...	75	7.8	12.3	6	1	12.0	<200
SEP.							
05...	105	7.9	14.8	3	1	10.7	70
18...	109	7.7	12.3	7	1	11.3	>800

12119005 CEDAR RIVER AT WILLIAMS AVENUE AT RENTON, WASH.

LOCATION.--Lat 47°29'04", long 122°12'18", in SW¼NW¼ sec.17, T.23 N., R.5 E., King County, at Williams Avenue bridge, 0.4 mi (0.6 km) downstream from gaging station at Renton and at mile 1.2 (1.9 km).

DRAINAGE AREA.--187 mi² (484 km²).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)
OCT.											
10...	1530	460	.17	.00	.08	.12	.20	.01	.00	65	7.5
24...	1430	385	.01	.00	.10	.04	.14	.02	.02	60	7.6
NOV.											
06...	1545	355	.30	.01	.09	.20	.29	.01	.01	64	7.2
20...	1610	320	.27	.01	.07	.16	.23	.02	.01	19	7.6
DEC.											
05...	1530	365	.37	.00	.06	.12	.18	.03	.01	60	7.5
18...	1540	671	.54	.00	.18	.08	.26	.14	.01	57	7.4
JAN.											
02...	1450	1370	.40	.00	.04	.05	.09	.02	.00	44	7.3
29...	1545	1080	1.6	.00	.03	--	--	.02	.00	56	7.2
FEB.											
14...	1555	550	.29	.00	.02	.11	.13	.01	.00	68	7.6
26...	1550	570	.24	.00	.05	.09	.14	.01	.00	69	7.5
MAR.											
12...	1630	484	.32	.00	.03	.15	.18	.01	.00	82	7.6
26...	1615	375	.27	.00	.03	.08	.11	.01	.00	84	7.5
APR.											
09...	1500	360	.13	.00	.07	.08	.15	.01	.00	92	8.3
23...	1515	365	.23	.00	.05	.07	.12	.01	.01	86	7.5
MAY											
21...	1710	268	.13	.00	.05	.03	.08	.01	.01	76	7.6
30...	1835	276	.17	.00	.03	.10	.13	.01	.01	83	7.5
JUNE											
11...	1730	256	.13	.00	.01	.07	.08	.00	.00	88	7.8
25...	1645	335	.18	.00	.02	.12	.14	.01	.00	89	7.8
JULY											
16...	1705	112	.14	.01	.04	.12	.16	.02	.01	109	8.3
23...	1955	118	.13	.00	.02	.09	.11	.01	.00	117	8.0
AUG.											
07...	1345	125	.11	.00	.07	.02	.09	.01	.00	112	8.5
21...	1300	228	.10	.00	.03	.05	.08	.01	.00	112	8.1
SEP.											
05...	1335	150	.13	.00	.09	.03	.12	.03	.00	112	8.0
18...	1400	190	.14	.00	.02	.04	.06	.01	.01	90	8.0

12119005 CEDAR RIVER AT WILLIAMS AVENUE AT RENTON, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
OCT.										
10...	12.2	13	1	11.2	1000	0	7	6	.2	10
24...	9.9	10	2	11.8	200	0	3	2	.2	0
NOV.										
06...	9.1	16	2	11.1	220	0	8	6	.1	10
20...	7.7	0	1	12.6	500	0	2	0	.0	0
DEC.										
05...	2.5	0	3	13.0	150	0	4	2	.2	0
18...	6.8	60	37	12.3	>1600	0	3	3	.3	20
JAN.										
02...	5.4	43	3	12.5	<400	0	6	8	.0	10
29...	5.1	15	3	12.6	300	0	1	3	.0	0
FEB.										
14...	7.0	10	2	12.5	250	0	2	6	.1	10
26...	9.0	21	8	12.0	1200	10	4	5	.0	20
MAR.										
12...	7.5	15	2	12.0	220	0	8	9	.5	10
26...	9.9	41	2	11.9	100	0	10	0	.0	10
APR.										
09...	14.0	14	2	11.4	<100	0	10	4	.1	10
23...	10.6	17	2	11.5	150	0	9	5	.2	10
MAY										
21...	16.5	7	1	10.7	380	0	3	3	.3	10
30...	15.1	22	1	10.1	44	0	3	2	.4	10
JUNE										
11...	17.4	0	1	10.1	225	0	5	1	.1	10
25...	15.3	24	2	11.0	800	0	2	2	.1	10
JULY										
16...	22.6	14	1	9.3	700	0	8	2	.5	10
23...	17.0	63	1	14.0	520	0	8	2	.0	10
AUG.										
07...	15.9	11	1	10.5	780	0	2	2	.2	20
21...	14.8	10	2	12.0	2300	0	3	2	.0	40
SEP.										
05...	16.6	6	1	11.2	580	0	2	2	.0	0
18...	13.7	6	1	11.3	3500	0	4	8	.0	20

12128150 DEER LAKE NEAR CLINTON, WASH.

LOCATION.--Lat 47°58'28", long 122°22'41", in NE¼NE¼ sec.26, T.29 N., R.3 E., Island County, 1.2 mi (1.9 km) west of Clinton.

DRAINAGE AREA.--1.19 mi^2 (3.08 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for lake outlet. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, MARCH 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
MAR.										
16...	1145	3.0	7.2	1.0	40	20	4.2	2.6	4.6	1.2
16...	1150	46	7.1	1.0	40	0	--	--	--	--
MAY										
15...	1340	3.0	18.1	.5	30	0	--	--	--	--
15...	1350	45	7.7	1.4	100	60	--	--	--	--
JUNE										
26...	1320	3.0	19.0	.5	20	10	--	--	--	--
26...	1330	44	8.0	1.6	440	110	--	--	--	--
SEP.										
19...	1500	3.0	17.8	.5	20	0	3.8	2.7	5.1	1.3
19...	1505	43	8.5	2.0	1500	250	--	--	--	--

DATE	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
MAR.										
16...	16	13	9.1	5.8	.01	.00	.08	.39	.47	.05
16...	16	13	--	--	.01	.00	.06	.40	.46	.02
MAY										
15...	16	13	--	--	.02	.00	.09	.35	.44	.01
15...	17	14	--	--	.03	.00	.13	.05	.18	.01
JUNE										
26...	21	17	--	--	.00	.00	.05	.08	.13	.01
26...	25	21	--	--	.00	.00	.01	.15	.16	.02
SEP.										
19...	22	18	9.1	6.3	.01	.00	.05	.35	.40	.01
19...	29	24	--	--	.01	.00	.27	.25	.52	.02

DATE	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR (PLATINUM-COBALT UNITS)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
MAR.										
16...	.00	36	.05	4	21	8	66	10	6.4	7.5
16...	.00	--	--	--	--	--	66	10	--	--
MAY										
15...	.00	--	--	--	--	--	69	5	.7	9.0
15...	.00	--	--	--	--	--	63	10	--	--
JUNE										
26...	.00	--	--	--	--	--	66	10	2.1	9.5
26...	.00	--	--	--	--	--	64	10	--	--
SEP.										
19...	.00	40	.05	4	21	3	67	0	1.3	7.0
19...	.02	--	--	--	--	--	72	15	--	--

12128300 GOSS LAKE NEAR LANGLEY, WASH.

LOCATION.--Lat 48°02'04", long 122°28'48", in NW¼NW¼ sec.6, T.39 N., R.3 E., Island County, 3.1 mi (5.0 km) west of Langley.

DRAINAGE AREA.--1.41 mi^2 (3.65 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for southernmost point of lake. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, MARCH 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
MAR.										
15...	1105	3.0	7.5	3.0	50	20	5.1	4.8	7.4	1.4
15...	1115	71	4.4	4.0	50	20	--	--	--	--
MAY										
15...	1040	3.0	18.2	2.6	60	10	--	--	--	--
15...	1050	70	4.7	4.4	60	20	--	--	--	--
JUNE										
26...	1040	3.0	19.3	.1	40	0	--	--	--	--
26...	1050	69	4.8	4.9	110	70	--	--	--	--
SEP.										
19...	1830	3.0	17.3	.5	50	0	4.7	5.2	7.7	2.1
19...	1840	65	4.8	5.4	150	100	--	--	--	--

DATE	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
MAR.										
15...	21	17	14	9.6	.21	.00	.09	.31	.40	.02
15...	22	18	--	--	.30	.00	.08	.39	.47	.01
MAY										
15...	23	19	--	--	.13	.00	.09	.43	.52	.01
15...	23	19	--	--	.32	.00	.08	.39	.47	.01
JUNE										
26...	25	21	--	--	.01	.00	.06	.07	.13	.01
26...	30	25	--	--	.30	.00	.06	.04	.10	.03
SEP.										
19...	30	25	14	10	.01	.00	.05	.33	.38	.01
19...	30	25	--	--	.30	.00	.07	.29	.36	.02

DATE	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR (PLATINUM-COBALT UNITS)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
MAR.										
15...	.00	56	.08	4	33	15	98	20	5.0	7.5
15...	.00	--	--	--	--	--	68	20	--	--
MAY										
15...	.00	--	--	--	--	--	105	5	2.2	9.0
15...	.00	--	--	--	--	--	95	15	--	--
JUNE										
26...	.00	--	--	--	--	--	105	5	5.4	8.5
26...	.00	--	--	--	--	--	94	5	--	--
SEP.										
19...	.00	59	.08	2	33	9	107	5	1.5	7.0
19...	.00	--	--	--	--	--	93	5	--	--

12145490 ALICE LAKE NEAR PRESTON, WASH.

LOCATION.--Lat 47°31'52", long 121°53'24", in SE¼SE¼ sec.27, T.24 N., R.7 E., King County, 1.9 mi (3.1 km) northeast of Preston.

DRAINAGE AREA.--0.24 mi^2 (0.62 km^2).

PERIOD OF RECORD.--Chemical analyses: February 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for southernmost point of lake. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, FEBRUARY 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
FEB.										
23...	1110	3.0	6.1	1.3	50	0	1.0	.3	1.1	.3
23...	1120	27	5.7	1.3	30	0	--	--	--	--
MAY										
08...	1015	3.0	12.8	.5	40	10	--	--	--	--
08...	1025	27	8.1	1.1	40	20	--	--	--	--
JUNE										
25...	1025	3.0	18.9	.4	40	0	--	--	--	--
25...	1030	25	9.6	.7	220	10	--	--	--	--
SEP.										
27...	1030	3.0	15.1	.3	80	10	3.6	.3	1.1	.3
27...	1035	20	14.1	.2	50	0	--	--	--	--

DATE	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
FEB.										
23...	2	2	2.7	1.7	.08	.00	.10	.19	.29	.01
23...	6	5	--	--	.06	.00	.09	.19	.28	.01
MAY										
08...	7	6	--	--	.01	.00	.08	.25	.33	.01
08...	6	5	--	--	.05	.00	.15	.15	.30	.01
JUNE										
25...	8	7	--	--	.01	.00	.06	.11	.17	.01
25...	10	8	--	--	.00	.00	.19	.01	.20	.01
SEP.										
27...	8	7	2.8	1.5	.03	.00	.04	.24	.28	.00
27...	9	7	--	--	.03	.00	.06	.26	.32	.01

DATE	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR (PLATINUM-COBALT UNITS)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
FEB.										
23...	.00	9	.01	3	4	2	14	15	2.6	5.5
23...	.00	--	--	--	--	--	13	15	--	--
MAY										
08...	.00	--	--	--	--	--	14	5	2.4	4.5
08...	.00	--	--	--	--	--	15	5	--	--
JUNE										
25...	.00	--	--	--	--	--	14	10	.8	6.0
25...	.00	--	--	--	--	--	16	15	--	--
SEP.										
27...	.00	14	.02	9	10	4	15	0	.7	4.5
27...	.00	--	--	--	--	--	14	0	--	--

12148790 LANGLOIS LAKE NEAR CARNATION, WASH.

LOCATION.--Lat 47°38'08", long 121°53'03", in NE¼SE¼ sec.22, T.25 N., R.7 E., King County, 1.6 mi (2.6 km) southeast of Carnation.

DRAINAGE AREA.--0.37 mi^2 (0.96 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for southernmost point of lake. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, MARCH 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
MAR.											
07...	1615	3.0	2.1	2.6	9	20	5.7	1.4	2.6	.5	30
07...	1630	90	6.0	35	31000	1300	--	--	--	--	536
MAY											
09...	1110	3.0	13.4	2.4	9	0	--	--	--	--	30
09...	1120	88	5.7	29	22000	950	--	--	--	--	364
JUNE											
28...	1115	3.0	20.4	1.8	9	0	--	--	--	--	33
28...	1125	88	5.8	40	200	1600	--	--	--	--	643
SEP.											
26...	1430	3.0	17.0	1.5	30	0	6.0	.4	2.8	.5	28
26...	1435	88	5.8	38	34000	1300	--	--	--	--	594

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
MAR.											
07...	0	25	2.5	1.9	.13	.00	.07	.31	.38	.01	.00
07...	--	440	--	--	.01	.00	140	60	200	7.4	.86
MAY											
09...	--	25	--	--	.14	.00	.02	.26	.28	.04	.00
09...	--	299	--	--	.09	.00	69	3.0	72	5.7	3.8
JUNE											
28...	--	27	--	--	.01	.00	.08	.07	.15	.01	.00
28...	--	527	--	--	.12	.00	140	.00	140	13	.50
SEP.											
26...	--	23	2.5	1.8	.01	.00	.05	.23	.28	.00	.00
26...	--	487	--	--	.17	.01	126	26	152	11	.36

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	CARBON DIOXIDE (CO2) (MG/L)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
MAR.											
07...	32	.04	2	20	0	50	7.3	10	2.4	3.3	4.0
07...	--	--	--	--	--	900	--	45	--	--	--
MAY											
09...	--	--	--	--	--	49	--	15	--	.9	4.0
09...	--	--	--	--	--	1321	--	45	--	--	--
JUNE											
28...	--	--	--	--	--	50	--	5	--	1.7	5.0
28...	--	--	--	--	--	1040	--	45	--	--	--
SEP.											
26...	29	.04	4	17	0	49	--	5	--	2.4	3.0
26...	--	--	--	--	--	1078	--	55	--	--	--

12149000 SNOQUALMIE RIVER NEAR CARNATION, WASH.

LOCATION.--Lat 47°39'58", long 121°55'27", in NW¼SW¼ sec.9, T.25 N., R.7 E., King County, at highway bridge 40 ft (12 m) upstream from gaging station, 1.3 mi (2.1 km) northwest of Carnation, and at mile 23.0 (37.0 km).

DRAINAGE AREA.--603 mi^2 (1,562 km^2).

PERIOD OF RECORD.--Chemical analyses: November 1970 to September 1971, October 1972 to September 1973.
Water temperatures: October 1966 to June 1969.
Sediment records: October 1966 to June 1969.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)
OCT. 12...	0925	1280	50	7.4	8.6	33	2
NOV. 14...	0920	1740	43	7.5	6.2	22	0
DEC. 27...	1000	19900	25	6.8	5.5	65	40
JAN. 09...	0930	--	55	6.8	--	19	2
FEB. 06...	1045	1850	65	7.0	3.4	21	7
MAR. 06...	0920	2190	48	7.3	6.6	20	3
APR. 10...	1000	1920	55	8.2	9.6	20	2
MAY 15...	0935	7250	25	7.2	11.0	30	20
JUNE 12...	0700	2290	55	8.0	12.7	20	2
JULY 10...	1030	1560	47	7.4	16.2	9	2
AUG. 07...	1645	674	61	7.4	17.6	14	2
SEP. 25...	0800	1950	23	7.2	11.3	28	2

DATE	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
OCT. 12...	11.3	1500	0	3	3	.3	10
NOV. 14...	11.2	1400	0	2	0	.2	0
DEC. 27...	12.5	1200	0	2	1	.1	20
JAN. 09...	14.1	500	0	10	0	.1	10
FEB. 06...	12.8	160	0	2	2	.1	50
MAR. 06...	11.8	640	20	2	3	.1	40
APR. 10...	10.7	170	0	10	3	.1	10
MAY 15...	11.1	1000	0	10	1	.5	10
JUNE 12...	12.7	800	0	7	4	.3	10
JULY 10...	9.3	400	0	11	3	.5	20
AUG. 07...	10.9	3100	0	5	2	0	10
SEP. 25...	10.1	2800	--	--	--	--	--

12150480 MARGARET LAKE NEAR DUVAL, WASH.

LOCATION.--Lat 47°46'02", long 121°53'59", in SW¼NW¼ sec.3, T.26 N., R.7 E., King County, 4.3 mi (6.9 km) northeast of Duval.

DRAINAGE AREA.--2.38 mi^2 (6.16 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for lake outlet. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, MARCH 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
MAR.											
07...	1140	3.0	7.5	6.5	120	40	3.0	.6	2.1	.2	14
07...	1150	37	5.0	7.0	150	20	--	--	--	--	13
MAY											
09...	1420	3.0	12.0	5.2	110	10	--	--	--	--	15
09...	1430	37	7.0	6.5	150	30	--	--	--	--	11
JUNE											
28...	1425	3.0	19.8	4.2	150	10	--	--	--	--	20
28...	1430	37	7.8	6.8	370	260	--	--	--	--	19
SEP.											
25...	1530	3.0	16.2	3.5	440	120	4.0	.8	2.2	.3	17
25...	1535	32	8.1	6.8	4700	1400	--	--	--	--	19

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
MAR.											
07...	0	11	3.2	1.8	.59	.00	.06	.10	.16	.01	.00
07...	--	11	--	--	.61	.00	.06	.15	.21	.00	.00
MAY											
09...	--	12	--	--	.38	.00	.04	.20	.24	.00	.00
09...	--	9	--	--	.41	.00	.13	.09	.22	.00	.00
JUNE											
28...	--	16	--	--	.17	.00	.10	.09	.19	.01	.00
28...	--	16	--	--	.28	.00	.06	.04	.10	.02	.00
SEP.											
25...	--	14	2.7	1.9	.02	.00	.07	.28	.35	.00	.00
25...	--	16	--	--	.02	.00	.58	.04	.62	.02	.07

DATE	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	CARBON DIOXIDE (CO2) (MG/L)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
MAR.											
07...	24	.03	3	10	0	30	6.9	20	2.8	2.7	3.5
07...	--	--	--	--	--	31	--	20	--	--	--
MAY											
09...	--	--	--	--	--	30	--	15	--	.9	4.0
09...	--	--	--	--	--	28	--	30	--	--	--
JUNE											
28...	--	--	--	--	--	31	--	5	--	1.0	5.0
28...	--	--	--	--	--	29	--	--	--	--	--
SEP.											
25...	24	.03	6	13	0	33	--	5	--	1.4	3.5
25...	--	--	--	--	--	81	--	20	--	--	--

12157900 LOMA LAKE NEAR TULALIP, WASH.

LOCATION.--Lat 48°08'03", long 122°15'15", in NW¼NE¼ sec.35, T.31 N., R.4 E., Snohomish County, 5.0 mi (8.0 km) northeast of Tulalip.

DRAINAGE AREA.--0.15 mi^2 (0.39 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for lake outlet. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, MARCH 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
MAR.										
08...	1040	3.0	7.2	.4	140	20	3.2	1.0	2.5	.5
08...	1050	22	6.0	.9	170	20	--	--	--	--
MAY										
30...	1045	3.0	16.0	.1	130	10	--	--	--	--
30...	1055	22	7.8	1.5	400	100	--	--	--	--
JUNE										
27...	1010	3.0	19.0	.3	110	10	--	--	--	--
27...	1015	22	8.0	1.8	580	100	--	--	--	--
SEP.										
25...	1000	3.0	14.2	.5	160	50	2.9	1.1	2.2	.8
25...	1005	18	9.0	2.1	1100	160	--	--	--	--

DATE	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
MAR.										
08...	9	7	5.6	4.1	.52	.00	.18	.23	.41	.02
08...	6	5	--	--	.53	.00	.19	.39	.58	.03
MAY										
30...	6	5	--	--	.27	.00	.10	.45	.55	.01
30...	7	6	--	--	.30	.00	.27	.30	.57	.02
JUNE										
27...	7	6	--	--	.00	.00	.21	.09	.30	.03
27...	15	12	--	--	.13	.00	.44	.04	.48	.03
SEP.										
25...	8	7	5.3	4.7	.01	.00	.18	.47	.65	.03
25...	16	13	--	--	.01	.00	.62	.27	.89	.03

DATE	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR (PLATINUM-COBALT UNITS)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
MAR.										
08...	.01	22	.03	3	12	5	38	100	7.6	12
08...	.00	--	--	--	--	--	39	100	--	--
MAY										
30...	.00	--	--	--	--	--	36	150	2.2	15
30...	.00	--	--	--	--	--	36	150	--	--
JUNE										
27...	.00	--	--	--	--	--	34	150	8.5	15
27...	.00	--	--	--	--	--	37	150	--	--
SEP.										
25...	.02	22	.03	10	12	5	35	55	6.3	14
25...	.02	--	--	--	--	--	41	85	--	--

12157950 CRABAPPLE LAKE NEAR TULALIP, WASH.

LOCATION.--Lat 48°07'49", long 122°16'22", in SE¼SE¼ sec.34, T.31 N., R.4 E., Snohomish County, 4.9 mi (7.9 km) north of Tulalip.

DRAINAGE AREA.--1.20 mi^2 (3.11 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for lake outlet. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, MARCH 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
MAR.										
14...	1030	3.0	6.8	1.6	30	20	4.1	1.2	2.5	.6
14...	1040	37	4.9	2.0	40	0	--	--	--	--
MAY										
30...	1335	3.0	17.8	1.3	30	20	--	--	--	--
30...	1340	37	6.0	2.1	30	20	--	--	--	--
JULY										
18...	1300	3.0	24.0	1.1	50	10	--	--	--	--
18...	1315	34	6.8	--	--	--	--	--	--	--
SEP.										
25...	1200	3.0	16.0	.7	80	10	3.4	1.4	2.2	.7
25...	1205	32	7.0	2.1	110	110	--	--	--	--

DATE	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
MAR.										
14...	10	8	4.2	3.6	.86	.00	.06	.41	.47	.02
14...	9	7	--	--	.89	.00	.07	.30	.37	.01
MAY										
30...	900	738	--	--	.72	.00	.04	.31	.35	.01
30...	10	8	--	--	.71	.00	.09	.19	.28	.01
JULY										
18...	16	13	--	--	.43	.00	.06	.35	.41	.01
18...	--	--	--	--	.65	.00	.09	.22	.31	.01
SEP.										
25...	12	10	5.5	4.2	.21	.00	.06	.37	.43	.01
25...	17	14	--	--	.42	.00	.16	.20	.36	.01

DATE	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR (PLATINUM-COBALT UNITS)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
MAR.										
14...	.00	23	.03	3	15	7	46	10	4.2	5.0
14...	.00	--	--	--	--	--	46	10	--	--
MAY										
30...	.00	--	--	--	--	--	44	20	1.7	6.5
30...	.00	--	--	--	--	--	42	20	--	--
JULY										
18...	.00	--	--	--	--	--	59	10	2.0	6.0
18...	.00	--	--	--	--	--	56	10	--	--
SEP.										
25...	.01	24	.03	7	14	4	41	0	1.4	5.5
25...	.00	--	--	--	--	--	41	5	--	--

12158000 SHOECRAFT LAKE NEAR TULALIP, WASH.

LOCATION.--Lat 48°07'34", long 122°18'20", in SE¼SW¼ sec.33, T.31 N., R.4 E., Snohomish County, 4.2 mi (6.8 km) north at Tulalip.

DRAINAGE AREA.--6.00 mi² (15.54 km²).

PERIOD OF RECORD.--Chemical analyses: March 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for lake outlet. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, MARCH 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
MAR.										
14...	1340	3.0	7.0	.6	30	20	5.1	3.1	3.9	1.0
14...	1350	31	7.0	.5	9	20	--	--	--	--
MAY										
29...	1120	3.0	16.4	.4	20	0	--	--	--	--
29...	1130	32	9.4	1.3	720	280	--	--	--	--
JUNE										
27...	1245	3.0	19.8	.7	20	0	--	--	--	--
27...	1250	31	10.0	1.5	930	370	--	--	--	--
SEP.										
24...	1200	3.0	16.5	1.6	110	40	5.0	3.4	3.8	1.0
24...	1205	29	13.9	--	--	--	--	--	--	--

DATE	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
MAR.										
14...	26	21	5.5	4.8	.02	.00	.11	.33	.44	.11
14...	26	21	--	--	.01	.00	.11	.33	.44	.21
MAY										
29...	27	22	--	--	.01	.00	.04	.32	.36	.01
29...	32	26	--	--	.01	.00	.10	.35	.45	.03
JUNE										
27...	33	27	--	--	.00	.00	.09	.06	.15	.01
27...	42	34	--	--	.01	.00	.21	.18	.39	.05
SEP.										
24...	30	25	5.2	5.4	.02	.00	.08	.36	.44	.04
24...	--	--	--	--	.02	.00	.62	.34	.96	.03

DATE	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR (PLATINUM-COBALT UNITS)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
MAR.										
14...	.00	37	.05	5	26	4	67	20	12	6.5
14...	.00	--	--	--	--	--	67	20	--	--
MAY										
29...	.00	--	--	--	--	--	70	5	2.2	6.5
29...	.00	--	--	--	--	--	75	5	--	--
JUNE										
27...	.00	--	--	--	--	--	69	15	3.8	8.0
27...	.00	--	--	--	--	--	78	30	--	--
SEP.										
24...	.00	40	.05	1	26	2	72	0	2.0	6.0
24...	.00	--	--	--	--	--	86	25	--	--

12158070 HOWARD LAKE NEAR SYLVANA, WASH.

LOCATION.--Lat 48°09'30", long 122°19'42", in NE¼SW¼ sec.20, T.31 N., R.4 E., Snohomish County, 4.7 mi (7.6 km) southwest of Sylvana.

DRAINAGE AREA.--0.46 mi² (1.19 km²).

PERIOD OF RECORD.--Chemical analyses: March 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for lake outlet. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, MARCH 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
MAR.										
08...	1335	3.0	7.2	.0	210	30	5.8	3.9	4.0	1.0
08...	1345	48	4.4	.7	200	40	--	--	--	--
MAY										
29...	1400	3.0	17.9	.5	70	0	--	--	--	--
29...	1405	47	5.0	2.1	400	130	--	--	--	--
JULY										
18...	1020	3.0	23.1	.2	80	10	--	--	--	--
18...	1030	45	5.1	2.5	670	140	--	--	--	--
SEP.										
24...	1445	3.0	16.8	.7	70	10	5.8	4.1	4.9	1.3
24...	1450	44	15.0	2.9	610	150	--	--	--	--

DATE	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
MAR.										
08...	34	28	5.0	5.3	.18	.00	.24	.50	.74	.02
08...	35	29	--	--	.23	.00	.37	.33	.70	.03
MAY										
29...	33	27	--	--	.30	.00	.04	.43	.47	.02
29...	34	28	--	--	.26	.00	.31	.31	.62	.11
JULY										
18...	40	33	--	--	.01	.00	.06	1.8	1.9	.06
18...	42	34	--	--	.08	.00	.58	1.2	1.8	.19
SEP.										
24...	35	29	5.3	6.0	.02	.00	.06	.51	.57	.01
24...	43	35	--	--	.02	.00	.95	.15	1.1	.15

DATE	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR (PLATINUM-COBALT UNITS)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
MAR.										
08...	.00	42	.06	4	31	3	80	20	8.1	9.0
08...	.00	--	--	--	--	--	84	30	--	--
MAY										
29...	.00	--	--	--	--	--	83	10	1.9	11
29...	.05	--	--	--	--	--	78	20	--	--
JULY										
18...	.00	--	--	--	--	--	85	10	1.8	8.0
18...	.13	--	--	--	--	--	80	20	--	--
SEP.										
24...	.00	45	.06	1	31	3	83	0	2.0	8.5
24...	.15	--	--	--	--	--	83	15	--	--

12179000 SKAGIT RIVER ABOVE ALMA CREEK, NEAR MARBLEMOUNT, WASH.

LOCATION.--Lat 48°36'27", long 121°21'37", in SW¼NE¼ sec.15, T.36 N., R.11 E., Skagit County, Ross Lake National Recreation Area, temperature recorder at gaging station on right bank, 0.6 mi (1.0 km) upstream from Alma Creek, 6.8 mi (10.9 km) north of Marblemount, and at mile 85.8 (138.1 km).

DRAINAGE AREA.--1,274 mi² (3,300 km²), of which 400 mi² (1,036 km²) is in Canada.

PERIOD OF RECORD.--Chemical analyses: July 1959 to July 1960.
Water temperatures: January 1953 to September 1973 (discontinued).

EXTREMES.--1972-73:
Water temperatures: Maximum, 13.0°C Aug. 12; minimum, 1.5°C Feb. 8.

Period of record:
Water temperatures: Maximum, 13.5°C July 30, 1961, Sept. 5, 1966, July 31, 1970; minimum, 1.0°C Jan. 26, 27, 29-31, Feb. 1-3, 1972.

REMARKS.--Recorder not operating June 3-13 and Aug. 6-8; range in temperature, 6.0°C to 10.0°C and 9.5°C to 11.0°C, respectively.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	9.5	8.5	8.5	8.0	7.0	6.0	4.0	4.0	3.5	3.0	4.0	3.5
2	10.0	8.0	8.5	8.0	6.5	6.0	4.0	4.0	3.5	3.0	4.0	3.5
3	9.5	8.5	8.5	8.0	6.0	5.0	4.0	2.0	3.0	3.0	4.0	3.5
4	9.5	8.0	8.0	7.0	5.5	5.0	3.5	3.0	3.5	3.0	4.5	3.5
5	9.0	8.0	7.0	6.5	5.5	5.5	3.5	3.0	3.0	2.0	4.0	3.5
6	9.5	8.0	8.0	6.5	5.5	5.0	3.0	3.0	3.0	2.0	4.0	3.5
7	9.5	8.0	8.0	7.0	5.0	5.0	3.0	2.0	3.0	2.0	4.5	3.5
8	10.0	8.0	8.0	7.0	5.0	5.0	3.0	2.0	3.0	1.5	4.5	3.5
9	8.5	8.0	8.0	7.0	5.5	5.0	3.0	2.0	3.0	2.0	4.5	3.5
10	8.5	7.0	8.0	7.0	5.5	5.0	3.0	2.0	3.0	2.0	4.0	3.5
11	9.0	7.0	7.0	6.5	5.5	5.0	3.0	2.0	3.0	2.0	4.5	3.5
12	9.0	7.0	6.5	6.0	5.5	4.5	3.5	3.0	3.0	2.0	4.0	3.5
13	9.0	8.0	8.0	6.0	5.0	4.5	3.5	3.0	3.0	2.0	4.0	3.5
14	9.0	8.0	8.0	6.5	5.0	4.5	3.5	3.0	3.5	2.0	4.0	3.5
15	9.0	7.0	8.0	7.0	5.0	4.5	3.5	3.0	3.5	3.0	4.5	3.5
16	9.0	7.0	8.0	7.0	5.0	4.5	3.5	3.0	4.0	3.0	4.0	3.5
17	9.0	7.0	8.0	7.0	4.5	4.5	3.5	3.0	4.0	3.5	4.0	3.5
18	9.0	7.0	7.0	7.0	5.0	4.5	3.5	3.0	4.5	3.0	4.0	3.5
19	9.0	8.0	7.0	6.5	4.5	4.0	3.5	3.0	4.0	3.0	4.5	3.5
20	9.0	8.0	7.0	6.0	4.5	4.5	3.5	3.0	4.0	3.0	4.0	3.5
21	9.0	8.5	7.0	6.0	4.5	4.5	3.5	3.0	4.0	3.0	4.5	3.5
22	9.5	8.5	7.0	6.5	4.5	4.5	3.5	3.0	3.5	3.0	5.0	3.5
23	9.0	8.0	7.0	6.5	4.5	4.5	3.5	3.0	4.0	3.0	4.5	3.5
24	9.0	7.0	7.0	6.5	4.5	4.5	3.5	3.0	4.0	3.0	5.0	3.5
25	8.5	8.0	7.0	6.5	4.5	4.0	3.5	3.0	4.0	3.5	5.0	4.0
26	8.5	8.0	6.5	6.0	4.5	4.0	3.0	3.0	4.0	3.5	5.0	4.0
27	8.5	8.0	7.0	6.0	4.5	4.0	3.5	2.0	4.0	3.5	4.5	4.0
28	8.5	7.0	6.5	6.0	4.5	4.0	3.5	3.0	4.0	3.5	4.5	3.5
29	8.5	6.5	7.0	6.0	4.0	4.0	3.5	2.0	---	---	5.0	4.0
30	8.0	7.0	7.0	6.5	4.0	4.0	3.5	3.0	---	---	5.0	4.0
31	8.5	7.0	---	---	4.5	4.0	3.5	3.0	---	---	5.0	4.0
MONTH	10.0	6.5	8.5	6.0	7.0	4.0	4.0	2.0	4.5	1.5	5.0	3.5

12179000 SKAGIT RIVER ABOVE ALMA CREEK, NEAR MARBLEMOUNT, WASH.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	5.5	4.0	6.5	4.5	8.0	6.0	9.5	8.0	10.5	9.0	9.5	8.0
2	4.5	3.5	6.5	5.0	7.0	6.0	9.5	8.0	10.5	9.0	9.5	8.0
3	5.5	4.0	6.5	5.0	---	---	9.5	8.0	10.5	9.0	9.5	8.0
4	6.0	4.0	6.5	5.0	---	---	10.0	8.5	10.5	9.0	9.0	8.0
5	5.0	4.5	7.0	5.0	---	---	9.5	8.0	10.5	9.0	8.5	8.0
6	5.0	4.0	6.0	5.5	---	---	8.5	8.0	---	9.5	9.5	8.0
7	5.5	3.5	6.0	5.0	---	---	9.0	8.0	---	---	9.5	9.0
8	5.0	4.0	5.5	5.0	---	---	10.0	8.0	---	---	10.5	9.0
9	6.0	4.5	5.5	5.0	---	---	9.5	7.0	10.5	9.5	11.5	8.5
10	6.0	4.5	6.5	5.0	---	---	10.0	8.0	10.0	9.0	11.0	9.0
11	6.0	4.5	6.5	5.0	---	---	9.5	8.0	10.5	9.0	11.0	9.0
12	6.5	4.0	7.0	5.5	---	---	9.5	8.0	13.0	9.0	11.0	9.0
13	6.0	4.0	8.5	6.0	9.0	---	10.0	8.5	11.0	9.5	11.0	9.0
14	5.5	4.0	8.5	5.5	8.0	6.5	10.0	8.5	11.0	9.5	11.0	9.0
15	5.5	4.5	8.0	5.5	8.5	6.5	10.5	8.5	11.0	9.5	10.5	8.5
16	4.5	4.0	7.0	5.5	8.0	6.5	10.5	8.5	10.0	9.5	11.0	8.5
17	4.5	3.5	7.0	5.5	8.0	6.5	10.0	8.5	10.0	9.0	10.0	8.5
18	5.0	3.5	8.0	6.0	9.0	6.5	10.0	8.5	10.0	9.0	10.0	9.0
19	5.0	4.0	6.5	5.5	10.0	7.0	10.0	8.5	9.5	9.0	11.0	8.5
20	5.5	4.0	7.0	5.5	9.5	7.0	9.0	8.5	9.5	9.0	10.0	9.0
21	5.5	4.0	8.0	5.0	10.0	8.0	9.5	8.5	9.5	9.0	10.0	9.0
22	6.0	4.5	6.5	5.5	10.5	8.0	9.5	8.5	9.5	9.0	10.0	9.0
23	5.5	4.5	7.0	6.0	9.0	8.0	10.0	8.5	9.0	9.0	10.0	9.0
24	5.5	4.5	6.5	5.5	9.0	7.0	10.0	8.5	9.5	9.0	10.0	8.5
25	6.0	4.0	6.5	5.5	9.0	7.0	9.5	8.5	10.0	8.5	11.0	8.5
26	6.5	4.5	6.5	5.0	9.5	8.0	10.0	8.5	9.5	8.5	10.0	8.5
27	6.0	4.5	6.5	5.0	9.5	8.0	10.0	8.5	10.5	8.5	10.0	9.0
28	6.0	4.5	8.5	5.5	9.5	8.0	10.5	8.5	10.5	8.5	9.5	9.0
29	6.5	4.0	8.5	6.0	9.0	8.5	10.5	9.0	9.5	9.0	10.5	9.0
30	6.0	4.0	8.5	6.0	9.0	8.0	10.0	8.5	9.5	8.5	9.5	9.0
31	---	---	8.0	5.5	---	---	10.0	9.0	9.0	8.5	---	---
MONTH	6.5	3.5	8.5	4.5	---	---	10.5	7.0	13.0	8.5	11.5	8.0

12182500 CASCADE RIVER AT MARBLEMOUNT, WASH.

LOCATION.--Lat 48°31'26", long 121°22'58", in N½ sec.16, T.35 N., R.11 E., Skagit County, temperature recorder at gaging station on right bank, 1.1 mi (1.8 km) downstream from Boulder Creek, 2.2 mi (3.5 km) east of Marblemount, and at mile 2.9 (4.7 km).

DRAINAGE AREA.--168 mi^2 (435 km^2).

PERIOD OF RECORD.--Water temperatures: May 1952 to November 1963, September 1964, October 1965 to September 1973 (discontinued).

EXTREMES.--1972-73:
Water temperatures: Maximum, 12.0°C July 27, 28, Aug. 9, 10, 13, 14; minimum, freezing point Dec. 14, 15, 16.

Period of record:
Water temperatures: Maximum, 15.0°C Aug. 4, 1970; minimum, freezing point Feb. 1, 2, 18, 1956, Nov. 16, 1959, Jan. 19, 1960, Jan. 5, 1966, Jan. 29-Feb. 1, 1969, and Dec. 14-16, 1972.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.0	7.0	5.0	4.5	5.0	4.5	3.5	3.0	3.0	3.0	4.5	4.5
2	7.0	6.5	5.5	5.0	5.0	4.5	3.5	3.0	3.5	3.0	4.5	4.0
3	8.0	7.0	6.0	5.5	4.5	3.0	3.5	1.5	3.5	3.5	4.0	4.0
4	8.0	6.5	6.0	5.5	3.0	2.0	1.5	1.0	3.5	3.0	4.5	4.0
5	6.5	5.5	6.0	6.0	2.0	2.0	1.0	1.0	3.0	2.0	4.5	4.5
6	6.5	6.0	6.0	5.5	2.0	1.5	1.0	0.5	2.0	2.0	4.5	4.5
7	7.0	6.0	5.5	5.5	1.5	0.5	0.5	0.5	2.0	1.5	4.5	4.5
8	7.0	7.0	5.5	5.5	0.5	0.5	0.5	0.5	1.5	1.5	4.5	4.5
9	8.0	6.5	5.5	5.5	0.5	0.5	0.5	0.5	2.0	1.5	4.5	4.5
10	6.5	5.5	5.5	5.5	0.5	0.5	1.0	0.5	2.0	2.0	4.5	3.5
11	6.0	5.0	5.5	5.0	1.5	0.5	1.5	1.0	3.0	2.0	4.5	3.5
12	6.0	5.5	5.5	5.0	1.5	1.0	2.0	1.5	3.0	3.0	4.5	4.5
13	6.5	6.0	5.0	5.0	1.0	0.5	2.0	2.0	3.0	3.0	4.5	4.0
14	6.5	6.5	5.5	5.0	0.5	0.0	3.0	2.0	3.0	3.0	4.0	4.0
15	6.5	6.0	5.5	5.5	0.5	0.0	3.0	2.0	4.0	3.0	4.5	4.0
16	6.0	5.5	5.5	5.0	0.5	0.0	3.0	3.0	4.0	4.0	4.5	4.5
17	5.5	5.5	5.0	5.0	1.5	0.5	3.0	3.0	4.5	4.0	4.5	3.5
18	6.0	5.5	5.0	5.0	2.0	1.0	3.0	3.0	4.5	4.0	3.5	3.5
19	6.0	5.5	5.0	5.0	2.0	1.5	3.0	3.0	4.0	3.5	4.5	3.5
20	6.0	6.0	5.0	4.5	3.0	1.5	3.0	3.0	3.5	3.5	4.5	4.5
21	6.5	6.0	4.5	4.0	3.0	2.0	3.0	3.0	3.5	3.0	5.0	4.5
22	6.5	6.5	4.5	4.0	3.0	2.0	3.0	3.0	3.5	3.5	5.0	4.5
23	6.5	6.5	5.0	4.5	3.0	3.0	3.0	3.0	3.5	3.5	5.0	4.5
24	6.5	6.0	5.0	5.0	3.0	3.0	3.0	3.0	4.0	3.5	5.0	4.5
25	6.0	5.5	5.0	5.0	3.0	3.0	3.0	3.0	4.0	4.0	5.0	4.5
26	5.5	5.5	5.0	5.0	3.0	3.0	3.0	2.0	4.5	4.0	4.5	4.5
27	6.0	5.5	5.0	5.0	3.0	3.0	2.0	2.0	4.5	4.5	5.0	4.5
28	5.5	5.5	5.0	4.5	3.0	3.0	3.0	2.0	4.5	4.5	5.0	4.5
29	5.5	5.0	4.5	4.5	3.5	3.0	3.0	3.0	---	---	5.0	4.5
30	5.0	4.5	4.5	4.5	3.0	3.0	3.0	3.0	---	---	5.0	4.5
31	4.5	4.5	---	---	3.5	3.0	3.0	3.0	---	---	5.0	5.0
MONTH	8.0	4.5	6.0	4.0	5.0	0.0	3.5	0.5	4.5	1.5	5.0	3.5

12182500 CASCADE RIVER AT MARBLEMOUNT, WASH.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	5.0	4.5	7.0	5.5	6.0	5.5	9.0	7.0	11.5	10.0	10.5	9.5
2	5.5	4.5	6.5	5.5	5.5	5.5	10.0	8.0	11.5	10.0	10.5	9.5
3	5.5	4.5	6.0	6.0	6.5	5.5	10.5	8.0	11.5	10.5	11.0	9.5
4	6.5	5.0	6.5	5.5	9.0	6.0	10.0	9.0	11.5	10.5	11.0	9.5
5	6.5	5.5	8.0	6.0	9.0	6.5	9.0	8.5	11.0	10.0	11.5	10.5
6	5.5	4.5	7.0	6.0	9.0	6.5	8.5	8.0	11.0	9.5	11.5	11.0
7	5.0	4.0	6.0	5.5	6.5	6.5	8.0	7.0	11.5	10.0	11.0	9.5
8	5.0	4.0	6.0	5.5	6.5	6.0	9.0	8.0	11.5	10.0	10.5	9.5
9	6.5	5.0	5.5	5.5	6.5	6.0	10.5	8.5	12.0	10.5	10.5	9.5
10	6.5	5.5	6.0	4.5	8.0	5.5	10.0	9.0	12.0	10.5	11.0	10.0
11	6.5	5.5	8.0	4.5	8.0	6.0	9.5	8.0	11.5	10.0	11.5	10.5
12	6.5	5.5	8.5	5.5	7.0	6.5	10.5	8.0	11.5	10.5	11.0	10.5
13	6.5	5.5	8.5	6.0	6.5	6.0	11.0	9.0	12.0	10.5	10.5	9.5
14	6.0	4.5	8.0	6.0	6.5	6.5	11.0	9.0	12.0	10.5	10.5	9.5
15	6.0	5.5	6.5	5.5	6.5	6.5	11.0	9.0	11.5	10.5	10.0	9.5
16	6.0	5.0	8.0	5.5	6.5	6.5	11.0	9.0	11.5	10.5	9.5	8.5
17	5.0	3.5	8.0	5.5	6.5	6.5	11.0	9.5	10.5	9.5	9.0	8.5
18	5.0	4.0	6.5	6.0	8.0	6.5	11.0	9.5	10.0	8.5	9.0	9.0
19	5.5	5.0	6.0	5.5	8.5	7.0	11.0	10.0	10.5	9.0	9.0	9.0
20	6.5	5.0	5.5	5.0	9.5	7.0	11.0	10.0	11.0	9.5	9.0	9.0
21	6.5	5.0	7.0	5.0	10.0	8.0	10.0	9.0	11.0	9.5	9.0	9.0
22	6.0	6.0	6.5	6.0	9.5	8.0	9.0	8.5	10.5	9.5	9.0	9.0
23	6.0	5.5	6.5	6.0	9.5	8.0	9.5	8.5	10.5	9.5	9.0	9.0
24	5.5	5.5	6.5	5.5	8.0	6.5	9.0	8.0	10.0	9.5	9.0	8.5
25	6.5	5.0	5.5	5.5	8.0	7.0	10.5	9.0	11.0	9.5	9.0	8.5
26	6.5	6.0	5.5	5.5	9.0	8.0	11.5	9.5	10.5	10.0	8.5	8.5
27	6.5	5.5	5.5	5.0	10.0	8.0	12.0	10.0	10.5	10.0	9.0	8.5
28	6.0	4.5	8.5	5.5	9.5	8.0	12.0	10.5	10.5	10.0	9.0	9.0
29	6.5	4.5	9.0	6.5	9.0	6.5	11.5	10.5	11.5	10.0	9.0	9.0
30	7.0	5.0	8.5	6.5	8.5	7.0	11.5	10.0	11.0	10.0	9.0	8.5
31	---	---	7.0	5.5	---	---	11.5	10.0	10.0	9.5	---	---
MONTH	7.0	3.5	9.0	4.5	10.0	5.5	12.0	7.0	12.0	8.5	11.5	8.5

12196170 DAY LAKE NEAR LYMAN, WASH.

LOCATION.--Lat 48°24'26", long 121°58'34", in SE¼SW¼ sec.25, T.34 N., R.6 E., Skagit County, 12.5 mi (20.1 km) south of Lyman.

DRAINAGE AREA.--6.33 mi² (16.39 km²).

PERIOD OF RECORD.--Chemical analyses: March 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for lake outlet. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, MARCH 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)
MAR.										
19...	1505	3.0	3.8	3.9	170	20	3.7	.9	.7	.2
19...	1515	38	3.5	3.9	130	20	--	--	--	--
MAY										
17...	1150	3.0	14.6	3.8	130	10	--	--	--	--
17...	1200	40	6.7	3.8	200	10	--	--	--	--
JULY										
02...	1255	3.0	15.5	4.3	200	10	--	--	--	--
02...	1300	40	8.1	4.1	460	60	--	--	--	--
SEP.										
20...	1245	3.0	14.9	4.1	280	10	5.3	1.5	1.1	1.4
20...	1250	33	9.0	4.6	790	240	--	--	--	--

DATE	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)	ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)
MAR.										
19...	13	11	3.2	1.2	.02	.00	.05	.19	.24	.03
19...	13	11	--	--	.20	.00	.07	.16	.23	.02
MAY										
17...	15	12	--	--	.13	.00	.06	.04	.10	.05
17...	15	12	--	--	.16	.00	.07	.04	.11	.00
JULY										
02...	23	19	--	--	.07	.00	.06	.03	.09	.01
02...	21	17	--	--	.12	.00	.07	.01	.08	.01
SEP.										
20...	28	23	3.7	.8	.02	.00	.04	.11	.15	.00
20...	26	21	--	--	.16	.00	.05	.11	.16	.01

DATE	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	SUS-PENDED SOLIDS (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	COLOR (PLAT-INUM-COBALT UNITS)	CHLORO-PHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
MAR.										
19...	.00	20	.03	6	13	2	29	10	1.5	4.0
19...	.00	--	--	--	--	--	--	10	--	--
MAY										
17...	.03	--	--	--	--	--	32	15	.8	7.5
17...	.00	--	--	--	--	--	29	20	--	--
JULY										
02...	.00	--	--	--	--	--	36	40	.8	5.5
02...	.00	--	--	--	--	--	31	40	--	--
SEP.										
20...	.00	32	.04	1	19	0	40	0	1.2	3.0
20...	.00	--	--	--	--	--	33	30	--	--

12199200 MCMURRAY LAKE AT MCMURRAY, WASH.

LOCATION.--Lat 48°19'28", long 122°13'22", in NW¼NW¼ sec.30, T.33 N., R.5 E., Skagit County, 0.9 mi (1.1 km) northeast of McMurray.

DRAINAGE AREA.--3.25 mi^2 (8.42 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for lake outlet. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES , MARCH 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
MAR.										
20...	1430	3.0	6.8	8.2	220	120	7.4	2.7	6.1	.7
20...	1440	44	5.9	8.4	262	110	--	--	--	--
MAY										
18...	1240	3.0	18.7	2.5	110	20	--	--	--	--
18...	1245	45	6.2	9.8	990	430	--	--	--	--
JULY										
03...	1215	3.0	19.5	1.4	50	10	--	--	--	--
03...	1220	44	6.4	12	12000	1100	--	--	--	--
SEP.										
22...	1140	3.0	17.0	2.5	120	10	6.6	2.9	6.5	1.6
22...	1145	42	6.8	13	8600	1200	--	--	--	--

DATE	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
MAR.										
20...	30	25	7.9	4.0	.77	.04	.14	.26	.40	.04
20...	31	25	--	--	.75	.04	.15	.37	.52	.03
MAY										
18...	32	26	--	--	.59	.01	.09	.10	.19	.01
18...	33	27	--	--	.78	.00	.14	.10	.24	.03
JULY										
03...	38	31	--	--	.42	.01	.04	.04	.08	.01
03...	48	39	--	--	.14	.00	.82	.08	.90	.17
SEP.										
22...	42	34	7.6	3.4	.01	.00	.05	.32	.37	.01
22...	62	51	--	--	.01	.00	1.6	1.1	2.7	.39

DATE	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR (PLATINUM-COBALT UNITS)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
MAR.										
20...	.00	52	.07	5	30	5	82	25	11	8.5
20...	.00	--	--	--	--	--	82	25	--	--
MAY										
18...	.00	--	--	--	--	--	86	15	4.1	6.0
18...	.00	--	--	--	--	--	84	20	--	--
JULY										
03...	.00	--	--	--	--	--	84	0	2.9	6.0
03...	.07	--	--	--	--	--	110	15	--	--
SEP.										
22...	.00	52	.07	2	28	0	92	0	3.3	4.0
22...	.34	--	--	--	--	--	--	80	--	--

12200020 CLEAR LAKE AT CLEAR LAKE, WASH.

LOCATION.--Lat 48°27'15", long 122°13'26", in NW¼NW¼ sec.7, T.34 N., R.5 E., Skagit County, 0.8 mi (1.3 km) southeast of town of Clear Lake.

DRAINAGE AREA.--2.34 mi^2 (6.06 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1973 to September 1973 (discontinued).

REMARKS.--Descriptive location given above is for lake outlet. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, MARCH 1973 TO SEPTEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
MAR.										
20...	0915	3.0	7.0	3.9	240	40	9.9	2.7	3.9	1.5
20...	0930	37	6.7	4.0	270	20	--	--	--	--
MAY										
18...	0930	3.0	19.0	.1	120	50	--	--	--	--
18...	0935	37	7.8	5.7	260	230	--	--	--	--
JULY										
03...	0945	3.0	19.3	.4	90	20	--	--	--	--
03...	0950	36	8.5	6.9	580	790	--	--	--	--
SEP.										
22...	0900	3.0	17.0	1.5	--	60	8.9	2.9	4.5	2.0
22...	0905	33	9.8	--	--	1400	--	--	--	--

DATE	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
MAR.										
20...	38	31	4.5	4.8	.22	.00	.11	.25	.36	.03
20...	39	32	--	--	.21	.00	.11	.21	.32	.03
MAY										
18...	41	34	--	--	.02	.00	.07	.10	.17	.00
18...	39	32	--	--	.21	.00	.13	.06	.19	.01
JULY										
03...	44	36	--	--	.01	.00	.03	.06	.09	.00
03...	50	41	--	--	.13	.00	.10	.00	.10	.01
SEP.										
22...	46	38	4.6	4.3	.01	.00	.04	.20	.24	.01
22...	59	48	--	--	.01	.00	.10	.29	.39	.01

DATE	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR (PLATINUM-COBALT UNITS)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
MAR.										
20...	.00	50	.07	4	36	5	85	20	3.7	5.5
20...	.00	--	--	--	--	--	85	20	--	--
MAY										
18...	.00	--	--	--	--	--	89	10	1.7	6.0
18...	.00	--	--	--	--	--	85	10	--	--
JULY										
03...	.00	--	--	--	--	--	87	0	2.3	5.5
03...	.00	--	--	--	--	--	94	0	--	--
SEP.										
22...	.00	51	.07	--	34	0	88	0	1.2	4.0
22...	.00	--	--	--	--	--	109	25	--	--

12201500 SAMISH RIVER NEAR BURLINGTON, WASH.

LOCATION.--Lat 48°32'46", long 122°20'13", in SE¼SE¼ sec.6, T.35 N., R.4 E., Skagit County, temperature recorder at former gaging station 500 ft (152 m) downstream from Interstate Highway 5 bridge, 0.5 mi (0.8 km) downstream from Friday Creek and 5.0 mi (8.0 km) north of Burlington.

DRAINAGE AREA.--87.8 mi^2 (227.4 km^2).

PERIOD OF RECORD.--Chemical analyses: July 1959 to September 1970.
Water temperatures: March 1973 to September 1973.

EXTREMES.--March to September 1973:
Water temperatures: Maximum, 19.0°C July 17, 18; minimum, 5.0°C Mar. 17, 23.

TEMPERATURE (°C) OF WATER, MARCH 1973 TO SEPTEMBER 1973

	MARCH			MARCH			MARCH	
Day	MAX	MIN	Day	MAX	MIN	Day	MAX	MIN
1	--	--	11	--	--	21	7.0	5.5
2	--	--	12	--	--	22	7.0	5.5
3	--	--	13	--	--	23	7.0	5.0
4	--	--	14	--	--	24	8.0	5.5
5	--	--	15	6.5	--	25	8.0	7.0
6	--	--	16	6.5	5.5	26	8.0	7.0
7	--	--	17	5.5	5.0	27	8.5	7.0
8	--	--	18	5.5	5.5	28	8.0	5.5
9	--	--	19	6.0	5.5	29	8.0	6.0
10	--	--	20	7.0	6.0	30	7.0	6.5
						31	7.0	6.5

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.0	6.5	11.5	9.0	11.5	10.5	15.0	13.0	18.0	14.5	13.0	10.0
2	8.5	6.0	11.0	10.0	11.5	10.0	16.5	13.0	18.0	14.5	13.5	10.5
3	9.0	6.5	10.5	10.0	14.0	11.0	16.5	13.5	18.0	14.5	14.0	11.5
4	10.5	8.5	11.0	9.5	14.5	11.0	15.0	13.5	16.0	15.0	14.0	11.0
5	10.0	8.5	10.5	9.5	15.0	12.0	14.0	9.5	15.0	14.0	15.0	12.0
6	9.5	7.0	9.5	9.0	14.5	13.0	14.0	12.0	15.0	13.5	14.5	13.5
7	9.0	6.0	9.5	9.0	13.0	12.0	14.5	13.0	17.0	13.5	14.0	13.0
8	9.0	6.5	9.5	8.5	13.0	12.0	15.5	13.0	17.0	14.0	13.5	11.0
9	10.5	8.0	10.0	9.0	13.5	11.0	17.0	13.5	17.0	14.5	14.5	12.0
10	10.5	8.0	10.0	9.0	14.0	11.0	15.0	13.0	15.5	14.5	15.0	12.0
11	10.5	9.0	11.5	8.0	13.5	11.5	16.5	11.5	16.0	14.0	15.0	12.0
12	11.0	8.5	13.0	9.5	14.0	13.0	16.5	12.0	17.0	14.0	14.5	12.0
13	11.0	8.5	14.0	10.5	15.0	13.0	18.0	13.5	18.0	15.0	13.5	11.0
14	10.0	8.0	15.0	11.5	13.5	12.0	18.5	14.5	16.0	15.0	13.0	11.0
15	10.0	9.0	14.0	12.0	13.5	11.5	18.5	14.5	15.0	14.0	13.0	11.0
16	9.0	8.5	14.5	11.0	13.5	11.5	18.5	15.0	14.5	12.0	13.0	10.0
17	9.0	8.0	15.0	11.5	11.5	11.0	19.0	15.0	14.0	11.5	12.0	10.5
18	8.5	7.0	14.0	13.0	13.5	11.0	19.0	15.0	14.0	10.5	12.0	11.5
19	8.0	7.0	13.0	10.0	14.0	11.5	18.5	15.0	14.5	11.0	12.0	11.0
20	9.5	6.5	12.0	9.5	16.0	13.0	16.0	14.0	15.0	12.0	13.0	11.5
21	9.0	7.0	13.0	9.0	16.5	14.5	15.0	13.5	14.5	11.0	12.0	12.0
22	9.0	8.5	11.5	10.5	17.0	15.0	14.0	13.5	14.0	11.0	12.0	11.5
23	9.0	8.5	11.0	10.5	15.5	13.5	16.0	13.0	13.0	10.5	13.0	11.5
24	9.0	8.0	11.0	9.0	14.0	13.5	14.0	12.0	13.5	10.5	12.0	11.5
25	10.0	7.0	10.0	8.5	15.5	13.5	17.0	13.5	14.0	10.5	13.0	11.0
26	10.0	9.0	11.0	8.5	16.0	14.5	18.0	14.5	14.0	12.0	13.0	11.5
27	10.5	8.5	10.0	8.5	18.0	15.0	18.5	15.0	13.0	12.0	13.0	11.0
28	9.5	8.0	13.0	9.0	16.5	14.5	18.0	15.0	13.0	11.5	13.0	11.0
29	10.5	7.0	14.0	10.5	14.5	11.0	17.0	15.0	14.5	12.0	13.0	12.0
30	11.0	8.0	15.0	11.5	14.0	13.0	18.0	14.5	14.0	12.0	12.0	10.0
31	---	---	13.5	11.5	---	---	17.0	14.5	13.0	11.0	---	---
MONTH	11.0	6.0	15.0	8.0	18.0	10.0	19.0	9.5	18.0	10.5	15.0	10.0

12203000 WHATCOM CREEK NEAR BELLINGHAM, WASH.

LOCATION.--Lat 48°45'14", long 122°25'35", in SW¼NE¼ sec.28, T.38 N., R.3 E., Whatcom County, at former gaging station, 0.8 mi (1.3 km) downstream from Whatcom Lake, and 2.0 mi (3.2 km) east of Bellingham.

DRAINAGE AREA.--56.1 mi^2 (145.3 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)
OCT.											
12...	1245	1.6	.06	.00	.03	.20	.23	.01	.00	116	7.2
26...	1200	.84	.07	.00	.08	.08	.16	.04	.00	63	7.3
NOV.											
14...	1300	--	.08	.00	.08	.21	.29	.01	.00	59	7.6
29...	1155	1.2	.07	.00	.18	.18	.36	.03	.00	81	8.3
DEC.											
27...	1245	--	.28	.00	.04	--	--	.05	.00	50	7.2
JAN.											
03...	1245	--	.30	.00	.09	.24	.33	.01	.00	62	7.4
23...	1300	--	.30	.00	.03	.31	.34	.00	.00	63	7.4
FEB.											
06...	1345	--	.30	.00	.04	.14	.18	.00	.00	74	7.3
20...	1215	--	.21	.00	.06	.18	.24	.01	.00	84	7.4
MAR.											
06...	1215	--	.18	.00	.07	.19	.26	.00	.00	79	7.5
20...	1115	2.2	.19	.01	.15	.08	.23	.02	.00	79	7.4
APR.											
10...	1210	--	.20	.00	.10	.19	.29	.00	.00	70	7.7
25...	1130	1.4	.19	.00	.11	.16	.27	.02	.04	440	7.6
MAY											
15...	1245	6.4	.19	.00	.13	.11	.24	.04	.02	63	7.6
29...	1230	28	.22	.00	.06	.26	.32	.00	.00	60	7.4
JUNE											
12...	1000	12	.18	.00	.14	.04	.18	.01	.00	67	7.8
26...	1730	--	.12	.00	.13	.00	.13	.00	.00	75	7.5
JULY											
10...	1400	15	.12	.00	.11	.14	.25	.00	.00	103	7.4
24...	0650	14	.10	.00	.05	.15	.20	.03	.00	67	7.5
AUG.											
07...	0700	8.7	.05	.00	.06	.11	.17	.01	.00	68	7.6
21...	0800	6.4	.03	.00	.08	.11	.19	.01	.00	70	7.4
SEP.											
18...	0830	.20	.15	.00	.03	.16	.19	.01	.00	100	7.2
25...	1100	.19	.09	.00	.05	.21	.26	.02	.00	50	7.1

12203000 WHATCOM CREEK NEAR BELLINGHAM, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT.										
12...	12.0	10	1	9.7	400	0	1	1	.2	10
26...	11.6	34	1	9.3	250	0	2	4	.2	0
NOV.										
14...	8.6	23	0	10.0	600	0	4	0	.1	0
29...	7.0	2	3	11.0	110	0	8	1	.2	140
DEC.										
27...	5.8	26	5	--	500	0	1	0	.0	30
JAN.										
03...	4.2	18	3	--	250	0	1	0	.4	10
23...	3.0	18	2	12.7	<100	0	4	1	.2	10
FEB.										
06...	3.4	27	2	13.2	44	0	4	1	.0	0
20...	4.8	27	3	13.4	40	0	3	4	.2	0
MAR.										
06...	7.1	24	2	12.3	60	20	2	4	1.4	20
20...	7.2	31	6	11.9	200	0	3	1	.1	20
APR.										
10...	10.5	25	3	11.4	370	0	7	3	.1	10
25...	11.0	29	1	11.5	300	0	4	2	.1	0
MAY										
15...	16.2	24	3	9.6	350	0	7	3	.2	70
29...	15.6	21	1	9.7	250	0	2	1	.0	100
JUNE										
12...	16.4	46	3	8.8	800	0	8	3	.4	60
26...	18.9	17	1	8.9	1300	0	5	3	5.1	10
JULY										
10...	18.9	15	1	8.8	1000	0	4	2	.1	--
24...	18.4	14	2	9.1	5200	0	2	0	.0	0
AUG.										
07...	19.0	17	1	10.4	600	0	2	2	.0	40
21...	17.9	16	2	8.8	1600	20	2	3	.4	80
SEP.										
18...	15.3	21	1	6.9	450	0	2	3	.0	30
25...	13.8	25	1	8.3	1300	0	1	8	.0	30

12203550 WHATCOM CREEK AT BELLINGHAM, WASH.

LOCATION.--Lat 48°45'18", long 122°28'53", in SW¼NW¼ sec.30, T.38 N., R.3 E., Whatcom County, 600 ft (183 m) upstream from Holly Street in Bellingham.

DRAINAGE AREA.--64.7 mi^2 (167.6 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)
OCT.							
12...	1315	.21	.02	.10	.06	.01	102
26...	1225	.26	.01	.07	.05	.02	130
NOV.							
14...	1330	.27	.00	.11	.05	.02	140
29...	1320	.35	.01	.19	.04	.01	370
DEC.							
27...	1330	.49	.00	.06	.04	.00	64
JAN.							
03...	1315	.80	.00	.09	.07	.00	67
23...	1400	.43	.00	.04	.01	.00	69
FEB.							
06...	1425	.75	.00	.10	.18	.02	140
20...	1245	.75	.00	.10	.03	.00	140
MAR.							
06...	1245	.65	.01	.11	.05	.01	114
20...	1245	.80	.01	.20	.03	.02	140
APR.							
10...	1330	.40	.01	.10	.07	.02	130
25...	1200	.39	.00	.06	.04	.01	440
MAY							
15...	1400	.30	.01	.12	.10	.04	108
29...	1400	.22	.00	.05	.04	.00	73
JUNE							
12...	1100	.24	.00	.12	.04	.02	102
26...	1530	.16	.04	.05	.06	.02	84
JULY							
10...	1515	.18	.00	.15	.03	.02	70
24...	0830	.19	.01	.04	.02	.01	89
AUG.							
07...	0800	.17	.00	.05	.03	.02	97
21...	0900	.19	.00	.06	.04	.01	99
SEP.							
18...	0915	.21	.00	.03	.04	.02	140
25...	1200	.17	.00	.06	.06	.00	66

12203550 WHATCOM CREEK AT BELLINGHAM, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)
OCT.						
12...	7.4	10.5	8	2	--	>4000
26...	7.6	10.8	50	1	10.6	11000
NOV.						
14...	7.7	7.0	24	0	10.5	10000
29...	8.0	6.2	6	2	12.5	4500
DEC.						
27...	7.2	5.9	28	15	12.4	800
JAN.						
03...	7.4	4.1	21	8	--	600
23...	7.4	4.0	25	7	12.5	100
FEB.						
06...	7.4	3.6	35	4	13.6	4000
20...	7.5	4.3	34	5	13.0	7000
MAR.						
06...	7.6	7.6	32	3	12.3	5000
20...	7.6	7.4	55	7	11.5	4000
APR.						
10...	7.8	10.0	33	3	11.5	9000
25...	8.0	10.4	31	2	11.8	2000
MAY						
15...	7.7	15.4	31	2	10.3	6000
29...	7.4	16.2	22	3	9.7	750
JUNE						
12...	7.7	14.4	39	4	9.7	>1600
26...	7.9	19.0	20	1	9.0	2300
JULY						
10...	8.1	18.0	19	2	9.3	3400
24...	7.6	15.8	16	1	10.0	3900
AUG.						
07...	7.5	17.0	17	1	11.8	2100
21...	7.5	15.0	18	2	9.8	6400
SEP.						
18...	7.4	15.9	23	2	8.9	16000
25...	7.6	14.8	12	1	10.1	20000

12213140 NOOKSACK RIVER AT BRENNAN, WASH.

LOCATION.--Lat 48°49'10", long 122°34'43", in NW¼NE¼ sec.5, T.38 N., R.2 E., Whatcom County, at bridge 0.6 mi (1.0 km) west of Brennan and 2.0 mi (3.2 km) south of Ferndale.

DRAINAGE AREA.--About 790 mi^2 (2,046 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTAN TANEOUS DIS- CHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO- GEN (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DIS- SOLVED ORTHO. PHOS- PHORUS (P) (MG/L)
OCT.							
12...	1145	1330	.09	.00	.03	.01	.00
26...	1130	1660	.19	.00	.03	.05	.01
NOV.							
14...	1215	1870	.32	.00	.02	.02	.01
29...	1235	1600	.37	.00	.07	.04	.01
DEC.							
27...	1200	16100	.74	.02	.27	.16	.01
JAN.							
03...	1130	4300	.50	.00	.07	.03	.00
23...	1330	3340	.54	.00	.06	.02	.00
FEB.							
06...	1315	2160	.53	.00	.05	.01	.00
20...	1345	2160	.47	.00	.05	.02	.00
MAR.							
06...	1140	2560	.36	.00	.09	.03	.00
20...	1205	2820	.46	.00	.10	.03	.01
APR.							
10...	1300	1910	.27	.00	.06	.02	.00
25...	1045	2260	.26	.00	.04	.01	.00
MAY							
15...	1215	7020	.13	.03	.51	.46	.00
29...	1320	4140	.20	.00	.05	.03	.01
JUNE							
12...	1030	3160	.16	.00	.03	.03	.02
26...	1600	4510	.07	.02	.06	.04	.02
JULY							
10...	1615	2790	.11	.00	.14	.02	.01
24...	0930	1890	.08	.01	.04	.03	.01
AUG.							
07...	0900	1960	.07	.00	.04	.04	.01
21...	1000	1230	.13	.00	.12	.06	.02
SEP.							
18...	1000	1240	.15	.00	.03	.02	.00
25...	1300	1740	.11	.00	.05	.07	.00

12213140 NOOKSACK RIVER AT BRENNAN, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.							
12...	95	7.5	8.8	16	10	11.2	300
26...	115	7.6	8.8	20	1	10.9	3000
NOV.							
14...	96	7.6	5.2	27	1	11.2	2000
29...	140	7.8	4.8	2	3	12.6	2000
DEC.							
27...	58	7.1	5.4	106	64	--	4000
JAN.							
03...	115	7.5	.2	35	30	--	1200
23...	114	7.5	4.0	37	8	12.2	250
FEB.							
06...	130	7.4	1.6	27	10	13.9	400
20...	120	7.4	5.1	27	6	13.4	500
MAR.							
06...	107	7.5	7.4	28	10	11.6	300
20...	108	7.4	6.8	41	9	11.5	700
APR.							
10...	117	7.7	11.4	33	2	10.9	220
25...	420	7.5	9.0	31	3	11.6	500
MAY							
15...	57	7.3	10.8	70	80	10.8	1000
29...	83	7.3	13.8	30	10	10.3	600
JUNE							
12...	92	7.7	12.4	29	1	9.9	800
26...	105	7.6	15.2	21	20	10.3	225
JULY							
10...	108	7.8	15.8	15	7	9.9	1200
24...	105	7.6	12.6	16	9	9.9	>1600
AUG.							
07...	75	7.5	13.9	22	18	11.9	7600
21...	116	7.6	13.8	18	22	9.4	2200
SEP.							
18...	120	7.6	12.9	9	8	9.8	>4000
25...	101	7.5	12.8	17	5	10.5	2400

12399500 COLUMBIA RIVER AT INTERNATIONAL BOUNDARY, WASH.
(Irrigation network station)

LOCATION.--Lat 48°55'00", long 117°47'40", in SW¼SW¼ sec.33, T.40 N., R.40 E., Stevens County, at bridge on State Highway 25 at Northport, 10.9 mi (17.5 km) downstream from gaging station at international boundary, and at mile 734.1 (1,181.2 km).

DRAINAGE AREA.--59,700 mi² (154,600 km²), approximately (at gaging station).

PERIOD OF RECORD.--Chemical analyses: February 1910 to January 1911, November 1951 to September 1973.
Water temperatures: November 1951 to September 1973.

EXTREMES.--1972-73:
Specific conductance: Maximum observed, 191 micromhos Mar. 14; minimum observed, 121 micromhos July 27.
Water temperatures: Maximum, 18.0°C July 28-Aug. 4, Aug. 12-14; minimum, 1.5°C Jan. 9, 10.

Period of record:
Specific conductance: Maximum observed, 285 micromhos Apr. 2, 1972; minimum observed, 115 micromhos June 23, 1972.
Water temperatures: Maximum, 21.0°C May 14, 19, 1959; minimum, freezing point on several days during January in 1960, 1962, and 1963.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)
JAN.							
04...	1815	21	4.8	1.6	.8	80	66
FEB.							
27...	1415	26	5.2	2.4	.8	87	71
MAY							
03...	1400	22	4.5	1.9	.8	80	66
JUNE							
22...	1615	19	3.8	1.5	.7	68	56
AUG.							
17...	1545	18	3.6	2.7	.7	65	53

DATE	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JAN.							
04...	13	1.5	.11	72	7	144	--
FEB.							
27...	20	1.4	.13	86	15	178	4.0
MAY							
03...	17	1.2	.02	73	8	--	9.0
JUNE							
22...	12	1.5	.06	63	7	140	14.0
AUG.							
17...	11	.7	.06	60	6	135	16.0

12399500 COLUMBIA RIVER AT INTERNATIONAL BOUNDARY, WASH.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141	154	145	181	156	167	183	151	142	135	127	129
2	141	145	149	177	160	175	167	162	142	133	128	130
3	137	161	149	159	159	175	167	162	145	137	128	132
4	142	160	150	157	161	173	175	163	145	138	126	139
5	146	162	151	152	163	174	174	157	142	139	125	130
6	144	160	147	150	163	173	169	154	132	139	134	130
7	147	160	140	150	160	171	170	152	132	135	126	130
8	147	159	138	148	161	169	167	151	130	135	123	128
9	147	160	139	151	161	168	166	145	137	138	125	129
10	147	156	138	150	167	175	166	152	139	145	128	139
11	147	160	138	147	163	176	166	148	139	125	129	143
12	145	166	138	156	165	172	159	142	135	132	129	143
13	151	166	139	155	172	184	170	143	134	129	128	140
14	154	169	140	156	170	191	169	142	134	133	130	143
15	155	169	142	168	167	172	169	142	138	133	131	144
16	156	169	147	164	169	182	168	138	142	130	130	147
17	155	167	148	179	170	181	167	128	140	131	130	140
18	158	169	150	188	162	180	163	129	140	130	133	140
19	157	168	154	187	179	177	167	138	140	129	134	151
20	157	158	156	185	180	178	167	139	138	125	133	152
21	158	155	152	178	171	186	161	138	143	125	132	150
22	---	156	152	180	166	183	169	142	136	128	132	152
23	160	151	158	166	169	182	164	138	134	130	132	140
24	156	151	166	154	141	185	164	139	131	125	130	140
25	159	147	176	154	181	188	164	130	133	127	130	132
26	148	147	180	158	177	185	160	136	133	129	130	139
27	160	149	---	158	176	184	160	139	132	121	132	139
28	159	149	180	161	176	184	158	142	132	125	131	143
29	158	148	179	157	---	185	157	142	137	123	135	143
30	159	150	179	161	---	184	160	142	139	125	135	145
31	157	---	181	161	---	183	---	137	---	126	140	---
MONTH	152	158	153	163	167	179	166	144	137	131	130	139

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.0	9.0	6.0	---	3.0	4.0	5.0	8.5	12.0	15.0	18.0	17.0
2	13.0	9.0	5.5	3.0	2.5	3.5	5.0	9.0	12.0	14.5	18.0	17.0
3	13.5	9.0	4.5	2.5	3.0	4.0	5.0	9.0	12.0	15.0	18.0	17.0
4	13.5	9.0	4.0	2.5	3.0	4.0	5.0	9.0	12.0	15.0	18.0	17.0
5	12.0	9.0	4.5	2.5	2.5	4.0	5.0	9.0	13.0	15.0	17.0	17.0
6	12.0	9.0	4.5	2.5	2.5	4.0	5.5	9.0	13.0	15.5	17.5	16.5
7	13.0	9.0	4.0	2.0	2.0	3.5	5.5	8.5	13.0	16.0	17.5	16.5
8	12.0	9.0	3.0	2.0	2.0	4.0	5.5	8.5	13.0	16.0	17.5	17.0
9	12.0	9.0	3.5	1.5	2.0	4.0	6.0	8.5	12.5	16.0	17.5	17.0
10	12.0	9.0	4.0	1.5	2.5	4.0	6.0	8.0	12.5	16.0	17.0	17.0
11	12.0	8.5	4.5	2.0	2.5	4.0	6.0	8.0	12.5	16.0	17.5	17.0
12	12.0	9.0	4.5	2.5	2.0	4.0	6.5	8.0	---	16.5	18.0	17.0
13	11.5	9.0	4.5	3.0	2.0	4.0	6.5	8.5	---	16.5	18.0	17.0
14	11.5	9.0	3.5	4.0	2.0	4.0	7.0	9.0	---	17.0	18.0	17.0
15	11.5	8.5	3.5	3.5	2.0	4.5	6.5	9.5	13.0	17.0	17.5	17.0
16	11.5	8.5	4.0	3.0	2.0	4.5	6.5	10.0	12.5	17.0	17.5	17.0
17	11.0	8.0	4.0	3.0	3.0	4.5	7.0	10.0	12.0	17.0	17.0	16.5
18	11.0	8.5	4.0	2.5	3.5	4.5	7.0	10.5	12.0	17.0	17.0	16.0
19	11.0	8.0	4.0	2.5	3.0	4.0	7.0	10.5	12.5	17.5	17.5	16.0
20	10.5	8.0	4.0	3.0	3.0	4.5	7.0	10.5	12.5	17.5	17.5	16.0
21	10.5	8.0	4.0	2.5	2.5	4.5	7.0	10.5	13.0	17.5	17.5	16.0
22	---	8.0	4.0	2.0	2.5	5.0	7.5	11.0	13.0	17.0	17.5	15.5
23	10.0	8.0	4.0	2.0	2.5	5.0	7.5	11.5	13.0	17.0	17.0	15.5
24	10.0	8.0	3.5	2.5	3.0	5.0	7.5	11.0	13.5	17.0	17.0	15.0
25	9.5	8.0	3.0	2.5	3.0	5.0	8.0	10.5	13.5	17.0	17.0	15.0
26	10.0	8.0	3.0	2.0	3.0	5.0	8.0	10.0	14.0	17.5	17.0	15.0
27	10.0	7.0	---	2.0	3.0	5.0	8.0	10.5	15.0	17.5	17.0	15.0
28	9.5	6.5	3.0	2.0	3.0	5.0	8.0	11.5	15.0	18.0	17.0	14.5
29	9.5	6.5	2.5	2.0	---	5.0	8.0	11.5	15.0	18.0	17.0	14.5
30	9.0	6.0	3.0	2.0	---	5.0	8.5	11.5	15.0	18.0	17.0	14.0
31	9.0	---	4.0	2.5	---	5.0	---	12.0	---	18.0	17.0	---
MONTH	11.5	8.0	4.0	2.5	2.5	4.5	6.5	10.0	13.0	16.5	17.5	16.0

12407700 CHEWELAH CREEK AT CHEWELAH, WASH.

LOCATION.--Lat 48°17'01", long 117°42'50", on line between SE¼ sec.11 and SW¼ sec.12, T.32 N., R.40 E., Stevens County, temperature recorder at gaging station 10 ft (3.0 m) downstream from road bridge north of city park, in north part of Chewelah and at mile 2.0 (3.2 km).

DRAINAGE AREA.--94.1 mi^2 (243.7 km^2).

PERIOD OF RECORD.--Water temperatures: April 1973 to September 1973.

EXTREMES.--April to September 1973:
Water temperatures: Maximum, 23.0°C July 18, 19; minimum, 4.0.C Apr. 20.

REMARKS.--Recorder not operating May 16 to June 7 (no range in temperature obtained).

TEMPERATURE (°C) OF WATER, APRIL 1973 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	12.0	6.0	---	---	15.5	10.0	22.0	11.0	15.5	10.0
2	---	---	12.0	7.0	---	---	16.5	9.5	22.0	10.5	16.0	9.0
3	---	---	13.0	9.5	---	---	19.0	10.0	22.0	11.0	16.5	10.0
4	---	---	12.0	9.5	---	---	19.5	11.5	22.0	11.0	17.0	9.5
5	---	---	13.5	8.0	---	---	19.0	12.0	17.0	11.5	18.0	10.0
6	---	---	13.0	9.5	---	---	16.5	11.0	19.5	10.0	16.0	10.5
7	---	---	10.5	8.0	---	---	17.0	10.0	20.5	10.0	16.0	11.5
8	---	---	10.5	8.5	13.0	11.0	16.5	10.5	21.0	10.5	16.0	10.0
9	---	---	10.5	6.5	15.0	10.0	20.0	10.0	21.5	11.0	17.0	10.0
10	---	---	10.0	6.5	15.5	9.0	20.0	11.0	21.0	11.0	18.0	10.5
11	---	---	11.5	6.0	16.0	9.0	19.5	11.0	21.0	11.0	18.5	11.0
12	---	---	13.5	7.0	14.5	11.0	20.0	10.0	21.5	11.5	17.0	10.0
13	10.5	---	15.0	9.0	16.5	11.5	21.0	11.0	18.0	11.5	16.0	9.5
14	9.5	5.0	16.0	10.0	14.5	11.0	22.0	11.5	21.0	11.5	13.0	9.5
15	7.0	5.0	---	11.0	13.5	10.0	22.0	11.5	20.0	10.5	13.5	8.0
16	6.5	5.5	---	---	11.5	9.0	22.0	12.0	19.0	10.0	14.0	6.5
17	8.0	5.0	---	---	10.0	8.0	22.0	12.0	18.5	10.0	13.0	6.5
18	7.0	5.0	---	---	12.0	7.0	23.0	10.5	18.5	8.5	13.5	10.5
19	8.0	4.5	---	---	15.0	8.5	23.0	10.5	19.0	8.5	11.0	10.5
20	9.5	4.0	---	---	16.5	9.5	15.5	13.0	19.0	9.5	11.5	10.5
21	10.5	5.5	---	---	18.0	11.0	19.5	11.5	19.5	10.0	13.0	10.5
22	10.5	8.0	---	---	20.0	12.0	20.0	10.5	19.0	11.0	11.5	10.0
23	10.0	8.0	---	---	18.0	13.5	19.5	9.5	18.0	10.0	11.0	10.5
24	10.0	7.0	---	---	16.5	12.0	19.5	9.0	15.5	10.5	11.5	10.0
25	12.0	6.5	---	---	16.0	13.0	18.0	10.0	17.0	8.5	11.5	9.0
26	11.5	7.0	---	---	17.0	12.0	22.0	10.5	15.0	9.0	13.0	9.0
27	11.5	8.5	---	---	20.5	12.0	21.0	11.5	18.0	10.0	13.0	8.5
28	12.0	7.0	---	---	20.0	12.0	21.0	11.0	16.0	10.5	13.5	9.0
29	10.5	6.0	---	---	19.0	11.0	21.5	10.5	18.0	10.5	13.5	9.0
30	11.0	7.0	---	---	16.0	10.5	22.0	11.5	14.5	10.0	12.0	10.0
31	---	---	---	---	---	---	21.5	10.5	13.0	11.0	---	---
MONTH	---	---	---	---	---	---	23.0	9.0	22.0	8.5	18.5	6.5

12408500 MILL CREEK NEAR COLVILLE, WASH.

LOCATION.--Lat 48°34'44", long 117°51'56", in SW¼NW¼ sec.35, T.36 N., R.39 E., Stevens County, temperature recorder at former gaging station, 3.0 mi (4.8 km) northeast of Colville, 5.3 mi (8.5 km) downstream from North Fork, and at mile 10.9 (17.5 km).

DRAINAGE AREA.--83.0 mi^2 (215.0 km^2).

PERIOD OF RECORD.--Water temperatures: May 1973 to September 1973.

EXTREMES.--May to September 1973:
Water temperatures: Maximum, 20.0°C July 15, 16, 19, 27, July 30 to Aug. 4, Aug. 12; minimum, 4.5°C May 1.

TEMPERATURE (°C) OF WATER, MAY 1973 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	11.0	4.5	12.0	7.0	15.5	9.0	20.0	12.0	15.0	9.5
2	---	---	11.0	5.5	13.5	8.0	16.5	9.0	20.0	11.5	15.0	9.0
3	---	---	10.5	6.5	14.0	7.0	18.0	9.5	20.0	12.0	15.5	10.0
4	---	---	11.0	7.0	15.5	8.0	18.0	11.0	20.0	12.0	16.0	9.5
5	---	---	12.0	6.0	16.0	9.0	17.0	11.5	17.0	12.0	16.5	10.0
6	---	---	10.5	7.0	15.0	10.5	15.0	11.5	17.0	10.0	15.5	10.0
7	---	---	9.0	6.0	14.0	10.5	15.5	9.5	18.5	10.0	16.0	11.0
8	---	---	8.5	6.5	12.0	10.0	18.0	10.0	19.5	11.0	15.5	9.5
9	---	---	8.0	5.0	14.5	9.0	18.5	10.0	19.5	11.5	16.0	9.5
10	---	---	9.5	5.5	14.5	8.0	19.0	11.0	19.5	11.5	16.5	10.0
11	---	---	11.0	5.0	15.0	8.0	18.0	10.0	19.5	12.0	16.5	10.5
12	---	---	13.0	5.5	14.5	9.5	18.0	10.0	20.0	11.5	15.5	9.5
13	---	---	14.0	6.5	15.5	10.5	19.0	10.5	18.0	11.5	14.5	9.0
14	---	---	15.0	8.0	13.0	9.5	19.5	11.0	19.5	11.0	11.5	8.5
15	---	---	15.0	9.0	13.5	9.0	20.0	11.5	18.5	10.5	12.0	7.0
16	---	---	15.5	9.5	10.5	8.0	20.0	12.0	18.0	10.0	13.0	6.5
17	---	---	15.5	9.5	11.0	7.0	19.5	11.5	16.5	9.5	13.0	7.0
18	---	---	14.5	9.5	12.0	6.0	19.5	11.0	16.0	8.5	13.5	9.5
19	---	---	13.5	9.0	14.5	7.0	20.0	11.5	16.5	8.5	11.0	10.0
20	---	---	11.0	7.0	16.5	9.0	15.0	13.0	17.0	9.5	11.5	10.0
21	---	---	13.0	6.0	18.0	10.0	16.5	11.5	18.0	10.0	13.0	9.5
22	---	---	11.5	6.5	19.0	11.5	17.0	10.5	17.0	10.0	11.0	9.5
23	---	---	11.0	8.5	16.5	12.0	17.0	10.0	16.0	10.0	11.0	9.5
24	---	---	11.5	9.5	15.0	10.5	16.5	9.5	14.5	10.0	12.0	9.0
25	---	---	11.0	8.5	15.0	11.0	18.0	10.5	16.0	9.0	11.5	8.0
26	---	---	10.5	7.0	16.5	10.5	19.5	11.5	14.5	9.5	12.0	8.5
27	---	---	12.0	6.5	19.0	11.0	20.0	12.0	16.0	10.0	13.0	8.0
28	---	---	14.0	7.0	19.0	11.0	19.0	11.5	15.5	10.0	13.0	8.5
29	---	---	15.0	8.0	18.0	10.5	19.5	11.5	16.5	11.0	13.0	8.5
30	---	---	13.5	9.0	14.0	9.5	20.0	12.0	14.5	10.0	13.0	9.0
31	---	---	14.0	9.0	---	---	20.0	11.5	13.5	10.0	---	---
MONTH	---	---	15.5	4.5	19.0	6.0	20.0	9.0	20.0	8.5	16.5	6.5

12409200 BARNABY CREEK NEAR RICE, WASH.

LOCATION.--Lat 48°26'04", long 118°13'31", in SW¼NE¼ sec.23, T.34 N., R.36 E., Ferry County, Colville Indian Reservation, 0.2 mile (0.3 kilometer) upstream from mouth, 2.6 miles (4.2 kilometers) west of Rice and 9.6 miles (15.4 kilometers) north of Inchelium.

DRAINAGE AREA.--45.9 mi^2 (119 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973.

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
12...	1340	15	.8	--	8	38	1.5
23...	0700	28	4.9	128	--	--	--
APR.							
11...	1430	32	5.3	105	6	24	2.1
MAY							
11...	0915	41	7.2	90	10	36	4.0
JUNE							
11...	0735	31	10.1	107	7	27	2.3
17...	1230	22	--	113	--	--	--
JULY							
10...	0930	12	10.2	148	2	6	.19
AUG.							
15...	0930	7.1	12.9	199	4	18	.35
SEP.							
11...	1100	5.4	8.7	204	2	4	.06
OCT.							
11...	1800	6.2	8.0	199	--	3	.05
NOV.							
13...	1010	5.6	2.4	187	2	3	.05
DEC.							
11...	1145	3.3	.0	235	2	2	.02
JAN., 1973							
15...	1000	6.6	.8	230	3	10	.18
FEB.							
12...	1335	6.4	2.0	210	1	14	.24

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
23...	18	3.2	3.8	1.2	76	62	7.0	.7	.51	.010	.09
JUNE											
17...	15	2.9	2.8	1.0	61	50	6.7	.6	.37	.010	.04
SEP.											
11...	31	5.8	4.8	1.2	123	101	10	.3	.16	.000	.03
DEC.											
11...	35	7.0	5.6	1.5	139	114	12	.9	.06	.000	.04

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
23...	.30	--	.060	58	0	--	--	--	--	--	--
JUNE											
17...	.11	.020	.040	49	0	125	0	0	2	.1	7
SEP.											
11...	.26	.020	.040	101	0	14	0	1	2	.0	10
DEC.											
11...	.39	.022	.024	120	2	2	--	--	--	--	--

12409290 LITTLE JIM CREEK NEAR DAISY, WASH.

LOCATION.--Lat 48°22'04", long 118°11'43", in SE¼SE¼ sec.12, T.33 N., R.36 E., Ferry County, Colville Indian Reservation, at county road crossing, 0.2 mile (0.3 kilometers) upstream from mouth, 1.8 miles (2.9 kilometers) west of Daisy, and 4.8 miles (7.7 kilometers) north of Inchelium.

DRAINAGE AREA.--4.04 mi^2 (10.5 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
12...	1515	1.4	1.0	--	7	16	.06
23...	0715	1.5	5.0	300	--	--	--
APR.							
11...	1520	2.0	6.8	315	4	9	.05
MAY							
11...	0950	1.6	9.6	320	3	4	.02
JUNE							
11...	0825	.64	11.1	249	5	6	.01
17...	1300	.53	--	376	--	--	--
JULY							
10...	1030	.14	11.6	398	3	4	.00
AUG.							
15...	1020	.13	15.5	408	14	22	.01
SEP.							
11...	1130	.03	10.5	495	--	--	--
OCT.							
11...	1715	.05	8.2	--	--	--	--
NOV.							
13...	1030	.04	2.8	495	4	4	.00
DEC.							
11...	1220	.99	.9	510	9	50	.13
JAN., 1973							
15...	1030	.25	.0	390	3	12	.01
FEB.							
12...	1400	.26	2.0	375	1	12	.01

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
23...	40	12	7.6	1.6	158	130	33	1.1	.18	.000	.05
JUNE											
17...	48	15	9.1	1.8	206	169	35	.7	.39	.010	.03
SEP.											
11...	61	23	15	3.3	293	240	42	.9	.41	.010	.15
DEC.											
11...	59	27	15	2.4	285	234	56	1.6	.16	.010	.08

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
23...	.05	--	.030	150	20	--	--	--	--	--	--
JUNE											
17...	.13	.040	.060	181	13	39	0	0	3	.0	0
SEP.											
11...	.09	.070	.080	250	7	72	0	3	3	.2	10
DEC.											
11...	.14	.040	.064	260	25	7	--	--	--	--	--

12409500 HALL CREEK AT INCHELIUM, WASH.

LOCATION.--Lat 48°18'41", long 118°12'39", in SE¼NW¼ sec.1, T.32 N., R.36 E., Ferry County, Colville Indian Reservation, at road crossing, 0.9 mile (1.4 kilometers) northwest of Inchelium.

DRAINAGE AREA.--161 mi^2 (417 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued.

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
12...	1625	87	2.0	--	11	55	13
23...	0740	164	5.0	96	--	--	--
APR.							
06...	0940	338	3.5	--	36	510	466
11...	1600	212	--	95	--	--	--
12...	1020	220	4.5	--	8	61	36
MAY							
11...	1030	308	7.5	74	14	86	72
23...	1225	417	10.2	--	10	110	124
JUNE							
11...	0910	188	10.0	98	8	40	20
17...	1320	128	--	113	--	--	--
JULY							
10...	1145	54	13.7	162	4	10	1.5
27...	1640	31	20.9	196	1	4	.33
AUG.							
15...	1130	28	14.6	220	10	45	3.4
SEP.							
11...	1000	15	9.8	256	2	2	.08
OCT.							
11...	1645	19	9.5	258	--	--	--
17...	0930	22	4.3	262	1	4	.24
NOV.							
13...	1050	23	3.4	240	2	6	.37
DEC.							
11...	1500	17	.0	230	3	4	.18
JAN., 1973							
15...	1300	21	.0	261	1	8	.45
FEB.							
12...	1225	24	3.0	240	1	14	.91

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
23...	12	2.8	3.9	1.2	52	43	5.9	.7	.34	.000	.10
JUNE											
17...	15	3.4	3.0	.9	62	51	8.2	.3	.28	.010	.03
SEP.											
11...	38	8.5	5.5	1.2	157	129	13	.4	.11	.000	.01
DEC.											
11...	41	10	5.7	1.4	174	143	16	1.0	.06	.000	.04

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
23...	.13	--	.050	41	0	--	--	--	--	--	--
JUNE											
17...	.06	.020	.030	51	1	25	0	1	2	.0	0
SEP.											
11...	.03	.010	.010	130	1	10	0	0	3	.	0
DEC.											
11...	.13	.009	.012	140	1	16	--	--	--	--	--

12409900 NORTH TWIN LAKE NEAR INCHELIUM, WASH.

LOCATION.--Lat 48°16'47", long 118°22'45", in NW¼NE¼ sec.15, T.32 N., R.35 E., Ferry County, 8.7 mi (14.0 km) west of Inchelium.

DRAINAGE AREA.--30.2 mi² (78.2 km²).

PERIOD OF RECORD.--Chemical analyses: March 1972 to November 1973 (discontinued).

REMARKS.--Descriptive location given above is for lake outlet. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, JANUARY 1973 TO NOVEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
JAN., 1973										
15...	1415	--	1.0	.06	.00	.17	.24	.41	.04	.01
FEB.										
20...	1415	--	.0	.09	.00	.11	.29	.40	.02	.01
JUNE										
06...	1450	3.0	--	.01	.00	.06	.24	.30	.00	.00
06...	1455	43	--	.08	.00	.18	.15	.33	.01	.00
18...	1500	3.0	--	.12	.00	.04	.31	.35	.01	.00
18...	1505	46	--	.07	.00	.13	.04	.17	.02	.00
JULY										
16...	1315	3.0	22.6	.02	.00	.02	.25	.27	.02	.02
16...	1325	44	5.8	.03	.00	.10	.27	.37	.03	.01
AUG.										
14...	1255	44	6.0	.01	.00	.09	.41	.50	.04	.01
SEP.										
18...	1217	3.0	16.9	.00	.00	.02	.28	.30	.00	.00
18...	1220	43	6.1	.01	.00	.08	.50	.58	.08	.01
OCT.										
24...	1040	3.0	--	.01	.00	.05	.27	.32	.01	.00
24...	1050	43	--	.01	.00	.05	.31	.36	.01	.00
NOV.										
13...	1210	3.0	6.2	.02	.00	.12	.21	.33	.02	.01
13...	1220	42	6.1	.02	.00	.12	.28	.40	.02	.01

12409920 SOUTH TWIN LAKE NEAR INCHELIUM, WASH.

LOCATION.--Lat 48°15'25", long 118°22'32", in NE¼SE¼ sec.22, T.32 N., R.35 E., Ferry County, 9.0 mi (14.5 km) west of Inchelium.

DRAINAGE AREA.--36.9 mi^2 (95.6 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to November 1973 (discontinued).

REMARKS.--Descriptive location given above is for lake outlet. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, JANUARY 1973 TO NOVEMBER 1973

DATE	TIME	DEPTH (FT)	TEMPER-ATURE (DEG C)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)	ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)
JAN., 1973										
15...	1430	--	2.0	.02	.00	.47	.37	.84	.06	.02
FEB.										
20...	1530	--	.0	.02	.02	.46	.46	.92	.04	.01
JUNE										
06...	1520	3.0	--	.02	.00	.09	.49	.58	.01	.00
06...	1525	43	--	.01	.00	1.3	.90	2.2	.40	.04
18...	1605	3.0	--	.03	.00	.07	.40	.47	.01	.00
18...	1610	52	--	.02	.00	2.8	2.2	5.0	.78	.65
JULY										
16...	1440	3.0	23.4	.01	.00	.04	.54	.58	.01	.00
16...	1445	45	--	.01	.00	1.9	2.9	4.8	.95	.12
AUG.										
14...	1355	53	6.0	.02	.00	2.2	.60	2.8	.48	.40
SEP.										
18...	1305	3.0	17.0	.00	.00	.04	.56	.60	.01	.00
18...	1310	46	6.1	.01	.00	2.5	1.0	3.5	.60	.56
OCT.										
24...	1130	3.0	--	.01	.00	.13	.62	.75	.01	.01
24...	1135	48	--	.01	.00	2.6	.40	3.0	.56	.24
NOV.										
13...	1310	3.0	6.2	.04	.00	.39	.55	.94	.06	.02
13...	1320	45	6.0	.03	.00	.40	.53	.93	.07	.03

12410500 STRANGER CREEK AT INCHELIUM, WASH.

LOCATION.--Lat 48°17'32", long 118°11'20", in SE¼NW¼ sec.7, T.32 N., R.37 E., Ferry County, Colville Indian Reservation, at road crossing, 0.4 mile (0.6 kilometer) upstream from mouth, and 0.5 mile (0.8 kilometer) southeast of Inchelium.

DRAINAGE AREA.--80.2 mi^2 (208 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
12...	1825	21	2.1	--	5	28	1.6
23...	1020	20	6.5	259	--	--	--
APR.							
11...	1615	84	--	130	--	--	--
12...	1215	103	6.2	--	15	--	--
MAY							
11...	1255	26	13.6	192	3	8	.56
JUNE							
11...	1115	33	13.5	171	7	16	1.4
17...	1342	28	--	194	--	--	--
JULY							
10...	1340	12	15.3	214	7	6	.19
AUG.							
15...	1400	10	15.2	220	6	23	.62
SEP.							
11...	1220	27	10.8	131	5	15	1.1
OCT.							
12...	0800	21	5.7	180	--	4	.23
NOV.							
13...	1225	12	3.5	250	2	2	.06
DEC.							
11...	1620	6.5	.0	295	2	6	.11
JAN., 1973							
15...	1545	10	.0	275	2	8	.22
FEB.							
12...	1440	9.8	.0	290	2	18	.48

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
23...	35	8.2	7.0	2.0	132	108	25	1.0	.54	.000	.07
JUNE											
17...	24	5.4	5.4	1.2	108	89	12	.4	.32	.010	.03
SEP.											
11...	17	3.7	5.2	1.1	76	62	5.7	.6	.37	.000	.08
DEC.											
11...	41	9.1	8.1	1.8	169	139	20	1.5	.00	--	.07

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
23...	.24	--	.020	120	13	--	--	--	--	--	--
JUNE											
17...	.06	.010	.040	82	0	60	0	0	2	.0	0
SEP.											
11...	.03	.020	.030	58	0	300	0	0	3	.2	10
DEC.											
11...	.18	.008	.017	140	1	5	--	--	--	--	--

12410710 NEZ PERCE CREEK NEAR KEWA, WASH.

LOCATION.--Lat 48°10'27", long 118°14'46", in SE¼NE¼ sec.22, T.31 N., R.36 E., Ferry County, Colville Indian Reservation, at road crossing, 1.9 miles (3.1 kilometers) southeast of Kewa, and 9.0 miles (14.5 kilometers) south of Inchelium.

DRAINAGE AREA.--22.6 mi^2 (58.5 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
13...	1005	31	1.0	--	86	320	27
23...	1040	22	5.8	135	--	--	--
APR.							
11...	1630	14	6.1	160	--	--	--
12...	1220	18	6.1	--	10	36	1.7
MAY							
11...	1330	8.5	14.0	182	3	8	.18
JUNE							
11...	1205	6.2	10.5	199	3	2	.03
17...	1410	4.4	--	210	--	--	--
JULY							
10...	1435	4.4	13.0	204	2	2	.02
AUG.							
15...	1445	4.6	12.0	204	2	2	.02
SEP.							
11...	1245	3.8	12.2	204	2	1	.01
OCT.							
12...	0840	3.6	5.3	210	2	2	.02
NOV.							
13...	1310	3.2	6.7	206	2	1	.01
DEC.							
12...	0745	3.2	1.3	205	2	2	.02
JAN., 1973							
16...	0820	4.7	4.0	202	6	26	.33
FEB.							
12...	1520	2.9	6.5	220	1	9	.07

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
23...	16	4.2	4.9	1.8	65	53	12	.7	.29	.010	.09
JUNE											
17...	25	6.7	5.9	1.4	103	84	20	1.0	.28	.010	.08
SEP.											
11...	26	6.9	6.4	1.5	105	86	19	.3	.15	.010	--
DEC.											
12...	26	7.1	6.5	1.7	106	87	19	1.6	.56	.010	.05

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
23...	.40	--	.060	57	4	--	--	--	--	--	--
JUNE											
17...	.80	.010	.010	89	6	53	0	0	2	.0	0
SEP.											
11...	.83	.010	.020	93	7	4	0	0	3	.7	20
DEC.											
12...	.95	.011	.013	94	7	4	--	--	--	--	--

12410715 FALLS CREEK NEAR KEWA, WASH.

LOCATION.--Lat 48°08'59", long 118°16'11", in NW¼NE¼ sec.33, T.31 N., R.36 E., Ferry County, Colville Indian Reservation, at road crossing, 1.0 mile (1.6 kilometers) upstream from mouth, 3.6 miles (5.8 kilometers) south of Kewa, and 11 miles (17.7 kilometers) southwest of Inchelium.

DRAINAGE AREA.--13.1 mi^2 (33.9 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
13...	1105	13	.8	--	24	90	3.2
23...	1045	9.5	5.9	161	--	--	--
APR.							
11...	1640	5.1	--	180	--	--	--
12...	1350	10	5.8	--	9	32	.86
MAY							
11...	1415	4.0	13.2	196	3	8	.09
JUNE							
11...	1245	2.7	12.5	221	2	3	.02
17...	1420	2.1	--	237	--	--	--
JULY							
10...	1510	1.2	13.8	257	2	2	.01
AUG.							
15...	1520	.37	15.1	305	3	9	.01
SEP.							
11...	1330	.23	11.4	330	1	4	.00
OCT.							
12...	0910	.29	4.6	322	2	--	--
NOV.							
13...	1330	.59	3.3	290	2	1	.00
DEC.							
12...	0845	.60	.0	330	2	2	.00
JAN., 1973							
16...	0900	1.8	.0	245	3	19	.09
FEB.							
12...	1550	.79	.5	280	1	6	.01

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
23...	17	6.3	5.9	1.5	77	63	18	.7	.28	.000	.05
JUNE											
17...	28	9.1	6.8	1.4	126	103	20	.7	.34	.010	.03
SEP.											
11...	43	13	8.3	1.7	188	154	28	.3	.16	.000	.04
DEC.											
12...	43	14	9.2	2.0	192	157	32	1.6	.08	.000	.03

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
23...	.25	--	.040	68	5	--	--	--	--	--	--
JUNE											
17...	.18	.040	.040	107	4	52	0	0	2	.0	0
SEP.											
11...	.24	.030	.040	160	7	140	0	0	3	.7	0
DEC.											
12...	.22	.024	.026	160	8	2	--	--	--	--	--

12410770 WILMONT CREEK NEAR HUNTERS, WASH.

LOCATION.--Lat 48°04'34", long 118°19'29", in NW¼NW¼ sec.30, T.30 N., R.36 E., Ferry County, Colville Indian Reservation, at road crossing, 5.9 miles (9.5 kilometers) west of Fruitland, and 6.5 miles (10.5 kilometers) southwest of Hunters.

DRAINAGE AREA.--51.1 mi^2 (132 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
13...	1240	82	.8	--	18	87	19
23...	1105	77	6.8	88	--	--	--
APR.							
11...	1655	51	--	88	--	--	--
12...	1435	62	5.8	--	5	20	3.3
MAY							
11...	1445	27	13.2	110	4	6	.44
JUNE							
11...	1335	17	13.6	118	2	8	.37
17...	1445	10	--	129	--	--	--
JULY							
10...	1550	5.9	14.5	142	1	2	.03
AUG.							
15...	1600	1.0	16.1	171	3	4	.01
SEP.							
11...	1410	.62	11.1	178	3	4	.01
OCT.							
12...	0950	1.5	6.6	172	--	4	.02
NOV.							
13...	1350	4.0	3.2	156	2	1	.01
DEC.							
12...	0930	.52	1.3	217	2	2	.00
JAN., 1973							
16...	0950	7.5	.0	130	2	6	.12
FEB.							
12...	1630	5.7	.0	147	1	4	.06

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
23...	10	1.9	4.3	1.4	48	39	6.6	.9	.24	.010	.09
JUNE											
17...	17	2.9	4.8	1.0	71	58	6.6	.4	.34	.010	.07
SEP.											
11...	24	4.4	6.9	1.9	109	89	5.9	.3	.24	.000	.06
DEC.											
12...	29	5.8	8.6	2.0	125	103	12	1.9	.09	.010	.05

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
23...	.08	--	.060	33	0	--	--	--	--	--	--
JUNE											
17...	.06	.050	.060	54	0	57	0	0	2	.0	7
SEP.											
11...	.05	--	--	78	0	90	0	0	4	.9	0
DEC.											
12...	.05	.019	.029	96	0	8	--	--	--	--	--

NINEMILE CREEK BASIN

12410800 NINEMILE CREEK NEAR FRUITLAND, WASH.

LOCATION.--Lat 48°02'50", long 118°26'06", in NW¼NW¼ sec.5, T.29 N., R.35 E., Ferry County, Colville Indian Reservation, 11.2 miles (18.0 kilometers) west of Fruitland and 12 miles (19.3 kilometers) southwest of Hunters.

DRAINAGE AREA.--106 mi^2 (275 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
13...	1415	195	1.1	--	45	832	438
24...	0840	118	3.1	157	--	--	--
APR.							
12...	1545	99	5.3	150	45	265	71
MAY							
11...	1800	41	14.1	196	12	28	3.1
JUNE							
11...	1720	31	14.7	224	9	18	1.5
17...	1635	22	--	242	--	--	--
JULY							
10...	1825	10	16.3	271	4	6	.16
AUG.							
15...	1750	5.0	18.6	285	2	2	.03
SEP.							
11...	1450	3.8	16.9	308	--	1	.01
OCT.							
12...	1020	4.8	5.2	308	--	3	.04
NOV.							
13...	1700	7.9	5.0	290	2	0	.00
DEC.							
12...	1315	3.8	.0	310	1	2	.02
JAN., 1973							
16...	1430	16	.0	230	7	24	1.0
FEB.							
12...	1715	10	3.0	276	3	13	.35

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
24...	18	5.4	5.7	1.8	84	69	9.8	2.3	.41	.010	.25
JUNE											
17...	31	8.3	6.6	1.8	140	115	11	.8	.22	.010	.05
SEP.											
11...	41	12	7.2	1.6	190	156	14	.4	.10	.000	.04
DEC.											
12...	42	12	7.4	1.5	194	159	15	1.4	.04	.000	.03

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
24...	.15	--	.15	67	0	--	--	--	--	--	--
JUNE											
17...	.14	.070	.10	111	0	.63	0	0	2	.0	0
SEP.											
11...	.04	.060	.060	150	0	170	0	0	2	.7	10
DEC.											
12...	.15	.050	.050	150	0	8	--	--	--	--	--

12410830 LITTLE NINEMILE CREEK NEAR FRUITLAND, WASH.

LOCATION.--Lat 48°01'04", long 118°24'38", in SW¼NW¼ sec.16, T.29 N., R.35 E., Ferry County, Colville Indian Reservation, at road crossing near mouth, 10.7 miles (17.2 kilometers) southwest of Fruitland.

DRAINAGE AREA.--6.12 mi^2 (15.9 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
13...	1510	78	2.6	--	86	1570	331
24...	0820	--	2.4	52	--	--	--
APR.							
13...	1200	5.1	5.6	56	20	24	.33
MAY							
11...	1730	2.5	11.6	62	7	10	.07
JUNE							
11...	1630	1.7	13.5	72	8	14	.06
17...	1615	.98	--	76	--	--	--
JULY							
10...	1810	.40	13.7	87	3	4	.00
AUG.							
15...	1735	.22	15.9	100	1	2	.00
SEP.							
12...	1140	.05	10.8	111	36	32	.00
OCT.							
12...	1130	.09	5.9	124	3	--	--
NOV.							
13...	1610	.35	4.6	101	3	2	.00
DEC.							
12...	1215	.03	.0	179	3	12	.00
JAN., 1973							
16...	1325	3.8	.0	55	60	140	1.4
FEB.							
13...	1010	.75	2.0	74	3	4	.01

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
24...	4.4	1.0	4.1	1.4	25	21	5.1	1.1	.70	.010	.12
JUNE											
17...	8.1	1.7	4.6	1.7	43	35	4.6	.7	.27	.000	.04
SEP.											
12...	12	3.0	6.2	2.3	71	58	5.1	.7	.30	.010	.32
DEC.											
12...	15	3.5	7.0	2.4	76	62	5.3	1.4	.15	.010	.05

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
24...	.14	--	.10	15	0	--	--	--	--	--	--
JUNE											
17...	.11	.040	.060	27	0	5	0	0	2	.1	20
SEP.											
12...	.11	.060	.016	42	0	20	0	1	1	.7	0
DEC.											
12...	.03	.052	.064	52	0	3	--	--	--	--	--

12410860 SIXMILE CREEK NEAR MILES, WASH.

LOCATION.--Lat 47°58'23", long 118°22'22", in SE¼NE¼ sec.34, T.29 N., R.35 E., Ferry County, Colville Indian Reservation, at road crossing near mouth, 5.7 miles (9.2 kilometers) northwest of Miles.

DRAINAGE AREA.--10.8 mi^2 (28.0 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
13...	1645	46	3.5	--	195	221	27
24...	0755	15	2.6	63	--	--	--
25...	1055	--	1.6	--	--	--	--
APR.							
13...	1130	8.2	6.3	61	35	124	2.7
MAY							
11...	1645	3.4	15.1	80	15	26	.24
JUNE							
11...	1535	3.9	15.8	91	31	82	.86
17...	1550	2.5	--	103	--	--	--
JULY							
10...	1740	.63	16.5	132	2	2	.00
AUG.							
15...	1700	.31	19.2	192	6	8	.01
SEP.							
12...	1115	.14	11.4	297	5	2	.00
OCT.							
12...	1105	.17	6.0	270	--	7	.00
NOV.							
13...	1515	.43	5.1	155	2	3	.00
DEC.							
12...	1130	.09	.0	355	3	19	.00
JAN., 1973							
16...	1215	11	.0	53	98	555	16
FEB.							
13...	0925	1.3	1.5	102	9	9	.03

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
24...	5.7	1.5	4.7	1.8	32	26	5.3	1.4	.45	.010	.27
JUNE											
17...	11	2.6	5.3	1.9	55	45	4.9	.9	.31	.010	.08
SEP.											
12...	43	9.4	7.3	1.8	189	155	9.8	.4	.13	.000	.03
DEC.											
12...	55	12	8.3	1.9	229	188	14	1.8	.09	.010	.06

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
24...	.32	--	.22	20	0	--	--	--	--	--	--
JUNE											
17...	.09	.060	.10	38	0	60	0	0	4	.0	7
SEP.											
12...	.30	.020	.020	150	0	68	0	0	2	.7	0
DEC.											
12...	.87	.032	.034	190	0	7	--	--	--	--	--

12410880 THREEMILE CREEK NEAR MILES, WASH.

LOCATION.--Lat 47°56'18", long 118°22'06", in NE¼SW¼ sec.11, T.28 N., R.35 E., Ferry County, Colville Indian Reservation, at road crossing near mouth, 4.1 miles (6.6 kilometers) northwest of Miles.

DRAINAGE AREA.--12.6 mi^2 (32.6 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
13...	1730	32	3.2	--	49	294	25
24...	0740	12	3.1	47	--	--	--
APR.							
13...	1030	5.4	5.5	54	20	15	.22
MAY							
11...	1600	1.8	13.6	64	12	2	.01
JUNE							
11...	1450	2.0	15.0	71	19	20	.11
17...	1540	1.8	--	74	--	--	--
JULY							
10...	1715	.20	16.5	91	2	2	.00
AUG.							
15...	1650	.03	19.6	132	350	768	.06
NOV.							
13...	1450	.02	4.9	129	5	2	.00
JAN., 1973							
16...	1140	7.7	.0	66	28	175	3.6
FEB.							
13...	0855	1.0	2.0	75	18	6	.02

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
24...	4.0	1.0	4.1	1.1	24	20	4.3	1.1	.69	.010	.11
JUNE											
17...	7.0	1.8	5.5	1.4	42	34	4.5	.7	.28	.010	.07

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
24...	.23	--	.090	14	0	--	--	--	--	--	--
JUNE											
17...	.08	.040	.070	24	0	50	0	0	4	.0	0

12419495 SPOKANE RIVER AT STATELINE BRIDGE NEAR GREENACRES, WASH.

LOCATION.--Lat 47°41'55", long 117°02'37", in NW¼NW¼ sec.6, T.25 N., R.46 E., Spokane County, at I-90 bridge, 0.1 mi (0.2 km) west of Washington-Idaho border, 5.5 mi (8.8 km) northeast of Greenacres and at mile 96.0 (154.5 km).

DRAINAGE AREA.--3,870 mi^2 (10,020 km^2), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)
OCT.								
10...	1440	1580	4.7	1.4	6.6	.2	.01	.00
31...	1025	1520	5.1	1.3	6.4	.2	.02	.00
NOV.								
19...	0950	1630	5.6	1.4	7.3	.1	.01	.00
29...	1005	1220	5.5	1.4	7.2	.2	.00	.00
DEC.								
12...	1035	3960	5.5	1.4	6.9	.1	.02	.00
27...	0945	4000	5.2	1.4	6.8	.2	.01	.00
JAN.								
18...	1005	4040	5.4	1.4	8.0	.2	.05	.00
FEB.								
06...	0940	5130	5.6	1.4	8.2	.2	.02	.00
22...	0930	3270	5.9	1.5	10	.2	.02	.00
27...	1550	2880	5.7	1.7	9.2	.2	.02	.00
MAR.								
13...	1350	4520	5.9	1.5	9.5	.2	.02	.00
27...	0930	4670	5.7	1.5	8.5	.1	.01	.00
APR.								
10...	1520	4330	5.8	1.6	8.3	.2	.02	.00
24...	1010	6280	5.9	1.5	8.6	.1	.01	.00
JUNE								
12...	1000	3620	5.8	1.7	8.2	.3	.02	.00
26...	1350	2150	5.8	1.7	9.2	.2	.01	.00
JULY								
11...	0855	641	5.9	1.7	9.5	.2	.02	.00
24...	0910	60	6.2	1.7	8.2	.2	.04	.00
AUG.								
07...	0820	360	6.1	1.7	8.1	.5	.06	.00
21...	0810	571	6.8	1.7	10	.2	.05	.00
SEP.								
12...	0800	1740	5.7	1.8	9.0	.2	.08	.00
25...	0840	1970	6.4	1.7	7.8	.1	.02	.01

12419495 SPOKANE RIVER AT STATELINE BRIDGE NEAR GREENACRES, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)
OCT.									
10...	.05	.16	.21	--	.01	.01	17	150	7.4
31...	.03	.14	.17	.11	.03	.00	18	50	7.4
NOV.									
19...	.04	.14	.18	.02	.00	.00	20	47	6.4
29...	.05	.13	.18	.03	.00	.00	19	53	6.7
DEC.									
12...	.06	.16	.22	.01	.01	.01	19	54	6.6
27...	.06	.04	.10	.02	.00	.00	19	47	6.9
JAN.									
18...	.08	.13	.21	.00	.00	.00	19	65	7.0
FEB.									
06...	.04	.19	.23	.01	.01	.00	20	59	7.5
22...	.09	.41	.50	.03	.00	.00	21	69	7.2
27...	.04	.13	.17	.19	.02	.01	21	55	7.5
MAR.									
13...	.06	.21	.27	.02	--	.00	21	62	7.2
27...	.05	.10	.15	.02	.02	.01	20	61	7.2
APR.									
10...	.06	.11	.17	.02	.01	.00	21	65	8.3
24...	.07	.12	.19	.02	.01	.00	21	57	7.6
JUNE									
12...	.08	.00	.08	.01	.01	.00	21	60	7.4
26...	.05	.01	.06	.01	.00	.00	21	74	7.6
JULY									
11...	.04	.13	.17	.02	.00	.00	22	72	7.6
24...	.07	.17	.24	.02	.01	.00	22	83	7.3
AUG.									
07...	.08	.15	.23	.07	.03	.02	22	77	6.7
21...	.14	.40	.54	.08	.02	.01	24	67	7.3
SEP.									
12...	.18	.49	.67	.04	.01	.00	22	61	7.6
25...	.15	.37	.52	.02	.01	.00	23	65	7.3

DATE	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	BIOCHEMICAL OXYGEN DEMAND (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT.								
10...	13.5	14	5	9.5	.9	550	<40	2.5
31...	8.0	12	1	9.6	1.6	800	<20	2.0
NOV.								
19...	7.4	4	1	9.0	1.3	500	<20	3.0
29...	5.4	2	1	11.3	.5	2000	40	2.0
DEC.								
12...	2.2	15	0	11.8	1.3	650	25	2.0
27...	5.0	7	1	11.0	.8	>4000	>100	3.0
JAN.								
18...	3.0	10	2	12.0	.7	170	<40	4.0
FEB.								
06...	.2	11	3	12.5	1.5	3500	200	3.5
22...	3.0	10	2	12.9	.8	200	<40	--
27...	5.0	64	3	12.9	1.4	250	<40	2.0
MAR.								
13...	4.0	15	2	12.5	1.4	>1000	76	3.5
27...	4.8	11	2	12.3	1.1	400	<40	5.5
APR.								
10...	8.6	13	1	12.1	2.1	120	<40	3.0
24...	7.5	16	3	12.3	--	1100	200	2.5
JUNE								
12...	16.6	11	1	9.6	3.2	1700	80	4.5
26...	21.8	8	1	8.8	4.5	<400	<20	4.5
JULY								
11...	18.4	3	2	8.5	1.0	1300	<20	5.0
24...	20.3	16	1	7.4	1.4	620	<20	8.5
AUG.								
07...	21.8	15	2	7.1	1.4	1000	[illegible]	6.5
21...	19.8	18	2	7.8	1.0	3000	--	4.0
SEP.								
12...	18.2	8	1	7.3	--	1000	<20	7.5
25...	14.7	25	1	9.2	2.0	<400	<20	7.0

12421200 SPOKANE RIVER AT TRENT BRIDGE, AT TRENTWOOD, WASH.

LOCATION.--Lat 47°41'32", long 117°14'03", in NW¼SW¼ sec.3, T.25 N., R.44 E., Spokane County, at bridge on Trent Road, 1.0 mi (1.6 km) west of Trentwood, and at mile 85.3 (137.2 km).

DRAINAGE AREA.--4,200 mi² (10,880 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)
OCT.								
10...	1520	1540	8.6	3.4	7.6	.2	.22	.00
31...	1055	1620	10	3.5	7.6	.2	.20	.00
NOV.								
19...	1035	--	10	3.5	8.3	.1	.17	.00
29...	1035	--	10	3.8	8.4	.2	.19	.00
DEC.								
12...	1115	--	6.8	2.1	7.1	.2	.05	.00
27...	1010	3900	6.7	2.1	9.0	.1	.06	.00
JAN.								
18...	1035	--	6.9	2.3	8.4	.2	.08	.00
FEB.								
22...	1010	3260	8.2	2.7	8.8	.2	.11	.00
27...	1510	2890	8.0	2.7	9.3	.2	.08	.00
MAR.								
13...	1255	4690	6.9	2.1	8.8	.2	.03	.00
20...	1350	--	6.9	2.1	8.9	.2	.74	.00
27...	1020	4880	7.2	2.2	8.9	.1	.02	.00
APR.								
10...	1430	4330	7.2	2.2	8.9	.2	.02	.00
24...	1040	7090	6.4	1.8	8.8	.1	.01	.00
JUNE								
12...	1040	--	7.1	2.3	8.4	.1	.05	.00
26...	1315	--	8.5	2.9	9.6	.2	.09	.00
JULY								
11...	0925	--	14	5.8	11	.2	.31	.00
24...	0940	--	25	11	13	.2	.62	.00
AUG.								
07...	0905	518	17	7.2	11	.2	.42	.00
21...	0845	--	15	5.5	11	.2	.31	.00
SEP.								
12...	0840	--	8.5	2.9	8.9	.2	.11	.00
25...	0910	1790	8.6	2.8	8.2	.0	.10	.01

12421200 SPOKANE RIVER AT TRENT BRIDGE, AT TRENTWOOD, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	AMMONIA NITRO-GEN (N) (MG/L)	ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED-PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO-PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT.									
10...	.04	.18	.22	--	.07	.01	35	88	7.3
31...	.07	.34	.41	.04	.01	.00	39	89	7.7
NOV.									
19...	.04	.08	.12	.02	.00	.00	39	80	7.1
29...	.04	.10	.14	.02	.00	.00	41	94	7.2
DEC.									
12...	.10	.41	.51	.01	.00	.00	26	60	6.6
27...	.02	.02	.04	.02	.00	.00	25	58	6.9
JAN.									
18...	.05	.16	.21	.02	.01	.00	27	72	7.3
FEB.									
22...	.06	.20	.26	.02	.00	.00	32	86	7.4
27...	.05	.16	.21	.20	.02	.01	31	74	7.6
MAR.									
13...	.03	.18	.21	.02	.02	.01	26	70	7.3
20...	.14	.13	.27	.02	.00	.00	26	87	7.6
27...	.03	.17	.20	.01	.00	.00	27	76	7.3
APR.									
10...	.06	.11	.17	.02	.01	.00	27	67	7.9
24...	.08	.11	.19	.01	.00	.00	23	62	7.5
JUNE									
12...	.04	.05	.09	.01	.01	.00	27	74	7.4
26...	.08	.05	.13	.02	.00	.00	33	73	7.8
JULY									
11...	.11	.10	.21	.02	.00	.00	59	150	8.0
24...	.14	.11	.25	.01	.01	.01	110	260	7.3
AUG.									
07...	.26	.51	.77	.24	.22	.20	72	190	7.7
21...	.16	.30	.46	.04	.02	.02	60	150	7.6
SEP.									
12...	.25	.65	.90	.08	.01	.00	33	108	7.7
25...	.07	.21	.28	.02	.01	.00	33	63	7.4

DATE	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	BIO-CHEM-ICAL OXYGEN DEMAND (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)	FECAL COLI-FORM (COL. PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT.								
10...	12.0	12	5	9.3	1.1	1500	<40	2.5
31...	8.0	11	2	10.7	1.6	640	<20	2.0
NOV.								
19...	7.4	4	1	10.6	1.0	620	<20	2.0
29...	5.4	2	0	11.3	.8	1000	<20	2.0
DEC.								
12...	1.8	22	0	12.1	1.0	250	<20	2.5
27...	5.2	8	1	11.3	1.2	500	<20	3.5
JAN.								
18...	3.2	10	2	12.0	.7	150	<40	2.5
FEB.								
22...	3.4	9	2	12.6	.7	160	<40	3.0
27...	6.0	10	2	12.7	1.6	<100	<40	2.0
MAR.								
13...	4.1	12	2	12.5	.8	>800	40	3.0
20...	5.2	24	2	12.1	1.4	100	<40	3.0
27...	4.6	9	2	12.0	.6	140	<40	5.0
APR.								
10...	11.4	12	2	11.7	2.4	<40	<40	2.0
24...	9.0	17	3	11.9	--	650	54	3.5
JUNE								
12...	16.0	11	1	9.5	.6	350	50	6.0
26...	20.1	12	1	9.0	.6	325	<20	6.5
JULY								
11...	16.4	5	1	8.7	1.2	1000	<20	6.0
24...	15.0	7	1	8.4	.7	400	<20	5.5
AUG.								
07...	17.0	14	1	8.6	.9	980	5	7.5
21...	18.0	13	2	8.2	1.2	2000	--	4.0
SEP.								
12...	16.7	4	2	8.9	--	1300	<20	8.0
25...	13.7	11	2	9.5	.8	<2000	<20	6.5

12422010 SPOKANE RIVER AT MISSION AVENUE, AT SPOKANE, WASH.

LOCATION.--Lat 47°40'19", long 117°23'12", on north line of NW¼ sec.16, T.25 N., R.43 E., Spokane County, at Mission Avenue bridge in Spokane, and at mile 76.8 (123.6 km).

DRAINAGE AREA.--4,220 mi² (10,930 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)
OCT.								
10...	1625	2080	14	6.3	12	.3	.33	.00
31...	1120	2040	12	5.0	8.5	.4	.32	.00
NOV.								
19...	1115	2180	12	4.8	9.2	.2	.25	.00
29...	1110	1860	14	6.0	9.3	.2	.35	.00
DEC.								
12...	1200	4180	8.6	2.8	7.7	.2	.12	.00
27...	1040	4300	7.8	2.6	7.6	.2	.09	.00
JAN.								
18...	1110	4520	8.5	3.0	8.6	.3	.14	.00
FEB.								
06...	1050	5740	8.3	2.8	8.7	.2	.10	.00
22...	1045	3910	10	3.7	9.6	.2	.56	.00
27...	1430	3520	10	3.9	10	.2	.19	.00
MAR.								
13...	1225	5080	8.2	2.8	9.3	.3	.08	.00
27...	1120	5190	8.4	2.8	9.2	.1	.05	.00
APR.								
10...	1400	4770	8.4	2.9	9.0	.2	.08	.00
24...	1125	6700	7.4	2.2	8.9	.1	.03	.00
JUNE								
12...	1125	3960	9.1	3.2	9.1	.1	.11	.00
26...	1230	2560	12	4.4	10	.2	.22	.00
JULY								
11...	1005	391	17	6.7	10	.2	.42	.00
24...	1010	749	21	9.1	11	.1	.58	.00
AUG.								
07...	0950	659	22	9.7	13	.5	.62	.01
21...	0925	818	18	7.2	12	.2	.43	.00
SEP.								
12...	0930	1860	11	4.0	12	.2	.17	.00
25...	0945	2160	11	3.9	8.6	.1	.20	.00

12422010 SPOKANE RIVER AT MISSION AVENUE, AT SPOKANE, WASH.--Continued

CHEMICAL ANALYSES. WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	BIOCHEMICAL OXYGEN DEMAND (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT.								
10...	12.2	10	1	8.9	.8	1200	<40	1.5
31...	8.0	35	2	10.2	1.8	320	<20	1.0
NOV.								
19...	8.0	3	1	9.9	1.2	500	<20	2.0
29...	5.6	2	0	11.0	.7	200	<20	2.0
DEC.								
12...	2.4	13	0	12.2	1.3	400	<40	2.0
27...	5.4	8	5	11.2	.8	1750	>100	3.0
JAN.								
18...	3.8	10	4	12.0	.8	800	100	3.0
FEB.								
06...	2.4	9	3	12.6	1.4	250	32	3.0
22...	4.2	8	4	12.1	.6	200	<40	5.5
27...	6.0	10	2	12.0	1.6	>1600	>120	--
MAR.								
13...	4.1	12	2	12.3	1.2	600	<40	2.5
27...	4.8	10	2	12.1	.8	200	<40	5.5
APR.								
10...	9.8	14	2	11.7	2.5	<100	<40	2.5
24...	8.8	16	2	11.9	2.0	320	60	3.0
JUNE								
12...	17.8	11	1	9.4	1.4	600	<20	8.0
26...	19.1	10	1	8.9	1.5	150	<20	3.5
JULY								
11...	17.2	5	1	8.6	1.6	100	<20	11
24...	16.2	8	2	8.6	.8	50	<20	11
AUG.								
07...	17.2	14	3	8.6	1.0	40	1	6.5
21...	17.1	13	2	8.2	.9	>400	--	3.0
SEP.								
12...	17.8	15	5	8.5	--	800	<20	7.5
25...	14.2	10	2	9.0	.8	1100	<20	7.5

DATE	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)
OCT.									
10...	.04	.13	.17	--	.01	.00	61	190	7.6
31...	.37	.09	.46	.14	.02	.00	51	125	8.0
NOV.									
19...	.03	.15	.18	.01	.00	.00	50	86	7.1
29...	.04	.10	.14	.02	.00	.00	60	150	7.3
DEC.									
12...	.03	.11	.14	.01	.01	.00	33	75	6.8
27...	.02	.06	.08	.01	.00	.00	30	77	6.4
JAN.									
18...	.04	.24	.28	.03	.01	.00	34	86	7.2
FEB.									
06...	.03	.21	.24	.02	.00	.00	32	84	7.5
22...	.04	.22	.26	.02	.01	.00	40	104	7.6
27...	.03	.16	.19	.20	.01	.00	41	98	7.6
MAR.									
13...	.03	.17	.20	.01	.00	.00	32	86	7.4
27...	.04	.10	.14	.01	.00	.00	33	87	7.3
APR.									
10...	.05	.11	.16	.02	.00	.00	33	81	7.9
24...	.07	.12	.19	.01	.00	--	28	70	7.5
JUNE									
12...	.03	.07	.10	.01	.00	.00	36	90	7.4
26...	.06	.02	.08	.01	.00	.00	48	119	8.0
JULY									
11...	.06	.25	.31	.01	.00	.00	70	160	8.1
24...	.02	.18	.20	.02	.00	.00	90	230	8.1
AUG.									
07...	.14	.21	.35	.01	.00	.00	95	240	8.1
21...	.05	.18	.23	.03	.02	.01	75	180	7.9
SEP.									
12...	.06	.41	.47	.04	.02	.00	44	130	7.5
25...	.14	.28	.42	.02	.00	.00	44	110	7.4

12422500 SPOKANE RIVER AT SPOKANE, WASH.

LOCATION.--Lat 47°39'34", long 117°26'53", in SW¼SW¼ sec.13, T.25 N., R.42 E., Spokane County, at gaging station at Cochran Street in Spokane and at mile 72.9 (117.3 km).

DRAINAGE AREA.--4,290 mi^2 (11,110 km^2), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)
OCT.								
10...	1700	2080	12	4.9	9.2	.2	.32	.00
31...	1230	2040	13	5.0	9.0	.3	.32	.00
NOV.								
19...	1150	2180	13	5.0	9.2	.2	.27	.00
29...	1145	1860	14	6.0	9.6	.2	.35	.00
DEC.								
12...	1240	4180	8.6	2.8	8.9	.2	.13	.00
27...	1110	4300	7.9	2.6	7.7	.1	.10	.00
JAN.								
18...	1150	4520	8.5	3.1	8.7	.2	.15	.00
FEB.								
06...	1125	5740	7.9	2.8	9.0	.2	.07	.00
22...	1130	3910	10	3.6	9.7	.2	.68	.00
27...	1215	3510	11	3.9	10	.2	.19	.00
MAR.								
13...	0945	5100	8.2	2.7	9.3	.3	.08	.00
27...	1240	5190	8.2	2.6	9.2	.1	.04	.00
APR.								
10...	1030	6510	8.4	2.9	9.2	.2	.15	.00
24...	1330	6880	7.3	2.2	8.9	.1	.04	.00
JUNE								
12...	1245	4060	9.5	3.4	9.1	.3	.12	.00
26...	1115	2560	12	4.4	10	.2	.21	.00
JULY								
11...	1035	385	14	5.3	9.9	.1	.29	.00
24...	1035	740	20	8.5	11	.3	.52	.00
AUG.								
07...	1050	667	24	--	12	.1	.63	.01
21...	1000	818	16	6.4	12	.2	.36	.00
SEP.								
12...	1030	1860	11	4.2	9.4	.1	.17	.00
25...	1015	2160	11	4.0	8.7	.0	.20	.01

12422500 SPOKANE RIVER AT SPOKANE, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	AMMONIA NITRO-GEN (N) (MG/L)	ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED-PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT.									
10...	.05	.12	.17	--	.05	.00	50	120	8.0
31...	.22	.13	.35	.04	.01	.00	53	110	8.0
NOV.									
19...	.04	.09	.13	.01	.00	.00	53	101	7.1
29...	.05	.16	.21	.03	.00	.00	60	130	7.1
DEC.									
12...	.06	.15	.21	.01	.00	.00	33	72	6.8
27...	.02	.09	.11	.02	.00	.00	30	70	6.9
JAN.									
18...	.06	.21	.27	.02	.01	.00	34	88	7.5
FEB.									
06...	.04	.13	.17	.00	.00	.00	31	85	7.5
22...	.05	.16	.21	.01	.00	.00	40	105	7.6
27...	.05	.15	.20	.20	.02	.00	44	100	7.7
MAR.									
13...	.04	.22	.26	.02	.00	.00	32	86	7.4
27...	.03	.12	.15	.01	.00	.00	31	76	7.4
APR.									
10...	.06	.22	.28	.00	.00	.00	33	80	7.8
24...	.06	.14	.20	.02	.00	.00	27	71	7.5
JUNE									
12...	.03	.06	.09	.01	.00	.00	38	93	7.5
26...	.08	.00	.08	.01	.01	.00	48	120	7.9
JULY									
11...	.05	.29	.34	.03	.00	.00	57	150	8.2
24...	.03	.16	.19	.01	.00	.00	85	210	8.2
AUG.									
07...	.08	.15	.23	.01	.01	.00	--	260	8.2
21...	.05	.18	.23	.01	.01	.01	66	170	8.0
SEP.									
12...	.09	.32	.41	.02	.01	.00	45	150	7.7
25...	.10	.24	.34	.02	.00	.00	44	99	7.7

DATE	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	BIO-CHEM-ICAL OXYGEN DEMAND (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)	FECAL COLI-FORM (COL. PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT.								
10...	12.5	11	1	9.5	1.6	1000	<40	4.0
31...	8.0	9	2	10.9	1.5	540	60	1.0
NOV.								
19...	7.8	5	1	10.9	1.2	650	25	2.0
29...	5.6	2	0	11.1	.9	1400	300	2.0
DEC.								
12...	1.8	26	0	13.2	1.0	1250	80	2.5
27...	5.4	7	6	12.9	.7	>4000	>500	3.0
JAN.								
18...	3.6	10	4	13.1	.6	1400	100	2.0
FEB.								
06...	1.7	10	4	13.3	15	150	<40	2.0
22...	4.2	8	2	13.4	.7	100	<40	1.0
27...	6.6	9	3	13.4	1.2	250	<40	--
MAR.								
13...	4.0	13	2	13.2	1.2	1200	56	3.0
27...	5.4	10	2	12.9	1.0	1600	160	7.5
APR.								
10...	8.6	14	3	11.9	2.4	120	<40	2.5
24...	8.8	16	3	14.0	--	120	<20	3.5
JUNE								
12...	17.0	24	1	10.8	1.5	1000	80	7.0
26...	18.4	9	3	10.2	.7	1250	35	3.5
JULY								
11...	18.2	6	2	9.8	1.7	1000	35	8.5
24...	16.4	9	2	10.3	1.1	360	<20	10
AUG.								
07...	17.6	14	4	10.4	1.0	440	15	7.5
21...	17.1	10	4	9.9	1.1	1200	--	3.0
SEP.								
12...	17.6	8	3	9.1	.5	2700	<20	7.5
25...	13.8	10	1	10.4	1.1	2400	60	9.5

12424003 HANGMAN CREEK AT MOUTH, AT SPOKANE, WASH.

LOCATION.--Lat 47°39'17", long 117°27'12", on west line of NW¼ sec.24, T.25 N., R.42 E., Spokane County, at Riverside Avenue bridge at west edge of Spokane, and at mile 0.6 (1.0 km).

DRAINAGE AREA.--689 mi² (1,785 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)
OCT.								
10...	1710	15	36	12	15	.4	.39	.00
31...	1250	18	37	12	13	.4	.57	.01
NOV.								
19...	1210	27	35	11	9.1	.3	.54	.01
29...	1210	15	35	11	13	.3	.77	.00
DEC.								
27...	1120	112	14	3.6	12	.6	2.4	.07
JAN.								
18...	1210	400	13	5.1	7.1	.2	.60	.02
FEB.								
06...	1330	50	21	7.2	12	.3	1.6	.05
22...	1200	170	12	4.5	16	.4	1.9	.03
27...	1240	130	7.0	4.7	14	.4	2.0	.03
MAR.								
13...	1005	130	10	4.6	11	.5	.18	.14
27...	1330	100	16	4.9	7.9	.1	1.2	.03
APR.								
10...	1100	57	22	6.7	8.8	.2	.61	.01
24...	1350	45	22	7.2	8.4	.1	.35	.01
JUNE								
12...	1320	7.0	39	12	14	.2	.66	.01
26...	1130	7.0	41	12	17	.3	.81	.01
JULY								
11...	1100	2.5	41	14	21	.2	1.1	.04
24...	1050	2.4	42	14	20	.1	1.2	.04
AUG.								
07...	1125	1.8	42	14	22	.5	1.1	.03
21...	1035	1.6	43	15	24	.3	1.4	.04
SEP.								
12...	1105	1.6	44	15	21	.1	1.2	.03
25...	1040	1.8	44	14	21	.1	1.4	.03

12424003 HANGMAN CREEK AT MOUTH, AT SPOKANE, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)
OCT.									
10...	.24	.45	.69	.04	.00	.00	140	322	8.7
31...	.07	.30	.37	.04	.02	.00	140	314	8.6
NOV.									
19...	.11	.33	.44	.05	.01	.00	130	30	7.8
29...	.06	.16	.22	.04	.03	.03	130	301	7.5
DEC.									
27...	.92	.98	1.9	1.1	.08	.01	50	131	7.2
JAN.									
18...	.36	.54	.90	.23	.15	.09	53	128	7.4
FEB.									
06...	.85	.06	.91	.56	.11	.07	82	204	7.9
22...	.63	7.2	7.8	.28	.20	.13	49	128	7.7
27...	.64	1.6	2.2	.82	.02	.08	37	110	7.6
MAR.									
13...	.10	2.5	2.6	1.8	.08	.08	44	119	7.7
27...	--	--	.23	.18	.05	.00	60	170	7.9
APR.									
10...	.18	.02	.20	.16	.07	.06	83	200	8.2
24...	.19	.28	.47	.11	.04	.04	85	208	8.7
JUNE									
12...	.12	.08	.20	.05	.04	.03	150	360	8.7
26...	.10	.06	.16	.04	.03	.02	150	380	8.7
JULY									
11...	.17	.12	.29	.03	.01	.01	160	390	8.6
24...	.05	.29	.34	.03	.00	.00	160	243	8.5
AUG.									
07...	.05	.23	.28	.01	.00	.00	160	420	8.5
21...	.06	.24	.30	.05	.00	.00	170	440	8.0
SEP.									
12...	.08	.47	.55	.05	.01	.00	170	420	8.4
25...	.09	.33	.42	.03	.01	.00	170	380	8.2

DATE	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	BIOCHEMICAL OXYGEN DEMAND (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT.								
10...	11.3	45	4	11.5	4.6	1000	<40	7.0
31...	4.0	25	4	14.6	1.5	520	<20	2.0
NOV.								
19...	6.1	8	4	13.8	2.0	600	<20	5.0
29...	2.3	3	0	14.1	.8	230	<20	3.0
DEC.								
27...	4.0	504	500	11.7	3.0	40000	1000	24
JAN.								
18...	2.0	994	1300	13.2	3.5	>16000	800	9.5
FEB.								
06...	.6	153	90	13.3	1.6	7000	100	7.5
22...	2.8	726	600	13.0	3.6	25000	200	35
27...	6.9	506	730	13.2	4.2	47000	700	--
MAR.								
13...	3.8	593	500	11.8	2.6	9000	200	25
27...	9.4	149	50	10.4	.8	1000	<100	11
APR.								
10...	12.4	98	20	11.1	3.8	<200	<40	6.0
24...	16.1	66	20	11.2	--	400	<20	6.5
JUNE								
12...	20.0	32	3	12.2	1.6	700	50	9.0
26...	21.2	24	2	12.2	1.9	>1600	>80	6.5
JULY								
11...	19.0	17	4	11.7	1.4	<400	45	12
24...	18.0	22	15	11.6	1.5	1400	30	27
AUG.								
07...	20.0	20	5	11.4	1.4	180	30	8.0
21...	17.6	20	2	12.5	1.2	500	--	4.0
SEP.								
12...	17.3	10	9	9.9	.4	2000	53	5.0
25...	12.2	16	3	11.5	.9	<4000	>80	11

12424100 SPOKANE RIVER AT FORT WRIGHT BRIDGE, AT SPOKANE, WASH.

LOCATION.--Lat 47°40'50", long 117°27'07", in SW¼NW¼ sec.12, T.25 N., R.42 E., Spokane County, at Fort Wright bridge at west edge of Spokane, 2.6 mi (4.2 km) downstream from Hangman Creek, and at mile 68.9 (110.9 km).

DRAINAGE AREA.--4,990 mi² (12,920 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)
OCT.								
10...	1745	2080	14	5.3	9.3	.2	.38	.00
31...	1310	2100	13	5.3	9.3	.3	.36	.00
NOV.								
19...	1345	2240	13	5.2	10	.2	.27	.00
29...	1230	--	16	6.3	10	.2	.47	.00
DEC.								
12...	1320	--	9.3	2.9	7.8	.2	.16	.00
27...	1145	4720	8.3	2.7	8.0	.2	.20	.02
JAN.								
18...	1240	5190	7.9	2.9	10	.3	.51	.03
FEB.								
22...	1225	4400	11	3.9	10	.2	.36	.03
27...	1300	3970	11	4.2	11	.2	.45	.01
MAR.								
13...	1030	5600	9.0	3.0	9.7	.2	.22	.02
20...	1245	5450	9.5	3.3	9.1	.2	1.5	.01
27...	1425	5510	8.6	2.7	9.3	.1	.10	.00
APR.								
10...	1120	6120	9.1	3.0	8.9	.2	.10	.00
24...	1415	7340	7.8	2.3	9.1	.1	.05	.00
JUNE								
12...	1350	4450	9.3	3.6	9.2	.2	.15	.00
26...	1020	2780	12	4.6	10	.2	.21	.02
JULY								
11...	1120	400	17	6.1	10	.1	.46	.00
24...	1110	800	21	8.8	11	.1	.57	.00
AUG.								
07...	1155	720	24	10	12	.5	.66	.01
21...	1120	880	--	--	--	--	.41	.01
SEP.								
12...	1140	2020	11	4.2	9.3	.2	.18	.00
25...	1100	2350	11	4.0	8.7	.1	.23	.00

12424100 SPOKANE RIVER AT FORT WRIGHT BRIDGE, AT SPOKANE, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	AMMONIA NITRO-GEN (N) (MG/L)	ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT.									
10...	.03	.17	.20	--	.02	.00	57	130	8.1
31...	.16	.12	.28	.03	.01	.00	54	130	8.2
NOV.									
19...	.03	.13	.16	.03	.00	.00	54	110	7.4
29...	.04	.13	.17	.03	.00	.00	66	150	7.3
DEC.									
12...	.06	.20	.26	.01	.00	.00	35	73	6.7
27...	.12	.08	.20	.08	.01	.00	32	79	7.1
JAN.									
18...	.04	.73	.77	.07	.04	.01	32	91	7.4
FEB.									
22...	.34	.27	.61	.14	.03	.00	44	115	7.8
27...	.03	.85	.88	.26	.04	.00	45	104	7.7
MAR.									
13...	.34	.16	.50	.11	.01	.00	35	94	7.6
20...	.11	.26	.37	.04	.01	.00	37	100	7.7
27...	.05	.07	.12	.02	.00	.00	33	91	7.7
APR.									
10...	.08	.08	.16	.02	.01	.00	35	86	8.1
24...	.07	.17	.24	.01	.00	.00	29	75	7.9
JUNE									
12...	.04	.01	.05	.02	.00	.00	38	118	8.4
26...	.07	.00	.07	.02	.00	.00	49	111	8.1
JULY									
11...	.07	.07	.14	.01	.00	.00	68	170	8.5
24...	.02	.18	.20	.01	.00	.00	89	240	8.0
AUG.									
07...	.10	.28	.38	.01	.00	.00	100	250	8.5
21...	.11	.34	.45	.01	.01	.00	--	190	8.0
SEP.									
12...	.07	.19	.26	.02	.01	.00	45	130	8.0
25...	.14	.48	.62	.02	.01	.00	44	110	7.7

DATE	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BIO-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	BIO-CHEM-ICAL OXYGEN DEMAND (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)	FECAL COLI-FORM (COL. PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT.								
10...	12.0	46	1	9.8	1.5	700	<40	1.5
31...	7.5	10	1	11.6	1.1	460	<20	1.0
NOV.								
19...	7.8	10	1	11.5	1.1	450	<20	4.0
29...	5.9	4	1	11.5	.9	500	80	1.0
DEC.								
12...	2.0	12	0	13.3	.8	600	50	2.0
27...	5.4	23	25	12.6	1.4	>4000	>500	5.0
JAN.								
18...	3.6	117	130	12.9	1.3	4000	200	12
FEB.								
22...	4.2	62	65	13.0	.9	2500	<100	7.0
27...	7.8	91	80	12.8	2.4	4000	100	
MAR.								
13...	4.1	51	35	12.8	1.0	1800	<100	4.0
20...	5.8	23	9	12.5	1.2	1000	80	5.0
27...	5.2	13	3	12.3	1.4	500	66	3.5
APR.								
10...	8.6	14	4	12.5	2.4	<200	<40	3.0
24...	9.8	18	3	13.4	--	150	<20	3.0
JUNE								
12...	17.0	18	1	10.4	1.5	600	67	3.0
26...	18.0	9	1	10.2	1.2	600	<20	9.5
JULY								
11...	18.4	5	1	9.7	1.5	125	<20	12
24...	17.8	9	3	9.8	1.0	160	<20	16
AUG.								
07...	19.0	10	2	10.0	1.0	120	1	6.0
21...	19.3	9	2	9.9	1.2	320	--	--
SEP.								
12...	18.6	10	2	6.7	.4	600	<20	8.0
25...	14.2	17	4	10.6	1.9	1500	30	5.5

12424200 SPOKANE RIVER AT RIVERSIDE STATE PARK, AT SPOKANE, WASH.

LOCATION.--Lat 47°41'48", long 117°29'48", in SE¼NE¼ sec.4, T.25 N., R.42 E., Spokane County, at Riverside State Park on west edge of Spokane, and at mile 66.1 (106.4 km).

DRAINAGE AREA.--5,010 mi² (12,980 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)
OCT.								
10...	1815	--	14	5.5	9.6	.3	.36	.00
31...	1350	1940	15	5.7	10	.2	.39	.00
NOV.								
19...	1415	2630	14	5.5	22	.2	.34	.01
29...	1255	--	16	6.3	10	.2	.42	.00
DEC.								
12...	1350	--	9.5	3.1	7.9	.2	.17	.00
27...	1205	4600	8.7	3.0	7.9	.2	.20	.01
JAN.								
18...	1310	4660	9.4	3.4	10	.3	.49	.00
FEB.								
06...	1415	--	--	--	--	--	--	--
22...	1310	4800	11	4.1	10	.2	.42	.03
27...	1345	4100	12	4.5	11	.2	.47	.02
MAR.								
13...	1105	5780	9.1	3.2	9.8	.2	.23	.02
20...	1215	--	9.5	3.3	9.5	.1	.49	.01
27...	1520	5470	9.2	3.0	9.3	.7	.17	.00
APR.								
10...	1200	5650	9.4	3.1	9.3	.2	.15	.00
24...	1510	7740	8.4	2.4	9.0	.1	.09	.00
JUNE								
12...	1430	4450	10	3.8	9.3	.1	.16	.00
26...	1000	2850	13	4.8	11	.2	.26	.00
JULY								
11...	1145	450	16	6.2	11	.2	.38	.01
24...	1130	850	23	9.4	12	.2	.59	.03
AUG.								
07...	1245	770	25	11	13	.5	.68	.02
21...	1200	930	19	7.6	13	.2	.48	.02
SEP.								
12...	1240	2100	13	4.9	10	.2	.22	.01
25...	1135	2400	12	4.3	10	.1	.25	.01

12424200 SPOKANE RIVER AT RIVERSIDE STATE PARK, AT SPOKANE, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)
OCT.									
10...	.49	.21	.70	.32	.23	.14	58	140	8.0
31...	.66	.22	.88	.22	.13	.10	61	150	7.9
NOV.									
19...	.43	.23	.66	.13	.09	.08	58	125	7.3
29...	.60	.25	.85	.16	.06	.06	66	150	7.1
DEC.									
12...	.31	.12	.43	.08	.06	.04	36	94	6.6
27...	.19	.14	.33	.09	.03	.02	34	90	7.0
JAN.									
18...	.23	.61	.84	.11	.07	.03	37	98	7.6
FEB.									
06...	--	--	--	--	--	--	--	110	7.0
22...	.65	.35	1.0	.20	.07	.03	44	130	7.7
27...	.47	.93	1.4	.31	.28	.06	49	116	7.7
MAR.									
13...	.43	.33	.76	.13	.03	.03	36	97	7.6
20...	.27	.24	.51	.09	.03	.01	37	99	7.7
27...	.22	.03	.25	.09	.05	.01	35	100	7.6
APR.									
10...	.19	.11	.30	.06	.05	.03	36	90	7.9
24...	.17	.17	.34	.07	.05	.02	31	79	7.8
JUNE									
12...	.34	.01	.35	.13	.08	.08	41	112	8.0
26...	.30	.20	.50	.08	.06	.06	52	140	8.0
JULY									
11...	.71	1.4	2.1	.21	.17	.14	65	180	8.2
24...	.66	.64	1.3	.25	.20	.19	96	258	8.0
AUG.									
07...	1.6	.70	2.3	.33	.24	.18	110	300	8.0
21...	.99	1.0	2.0	.19	.16	.15	79	220	7.7
SEP.									
12...	.75	.75	1.5	.14	.05	.01	53	150	7.8
25...	.48	.39	.87	.10	.07	.05	48	99	7.4

DATE	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	BIOCHEMICAL OXYGEN DEMAND (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT.								
10...	12.0	16	2	10.2	3.7	<40	<40	2.5
31...	8.0	16	2	11.6	3.5	<20	<20	2.0
NOV.								
19...	8.0	2	2	10.3	2.7	44	<20	3.0
29...	5.9	2	0	11.3	2.6	120	<20	3.0
DEC.								
12...	2.0	13	1	13.2	2.2	<40	<20	2.5
27...	5.6	25	15	12.2	.6	800	<40	3.5
JAN.								
18...	3.6	101	100	12.6	2.4	1000	<100	11
FEB.								
06...	2.8	22	30	--	2.2	200	<40	--
22...	5.8	59	48	12.8	2.4	<200	<40	8.5
27...	7.0	81	76	12.5	3.4	400	<100	--
MAR.								
13...	4.0	46	35	12.8	2.0	280	<40	4.5
20...	5.6	19	9	12.0	2.2	<100	<40	5.0
27...	5.4	16	4	12.4	2.5	40	<40	4.5
APR.								
10...	10.0	15	4	11.9	3.4	<40	<40	7.0
24...	9.2	19	4	12.9	--	<40	<20	6.0
JUNE								
12...	17.4	16	1	10.0	2.3	200	<20	5.5
26...	17.8	11	1	9.7	.8	250	<20	5.0
JULY								
11...	18.0	14	3	10.0	2.8	140	<20	10
24...	17.0	17	3	9.3	3.5	40	<20	11
AUG.								
07...	18.8	29	10	8.6	8.3	--	21000	18
21...	19.1	13	6	8.9	4.3	4900	--	6.0
SEP.								
12...	18.4	12	5	9.3	4.1	>40000	>4000	7.5
25...	14.3	17	2	9.5	2.1	<2000	<400	6.0

12425000 MEDICAL LAKE AT MEDICAL LAKE, WASH.

LOCATION.--Lat 47°33'48", long 117°41'21", in NW¼NW¼ sec.19, T.24 N., R.41 E., Spokane County, 0.8 mi (1.3 km) southwest of town of Medical Lake.

DRAINAGE AREA.--1.35 mi^2 (3.50 km^2).

PERIOD OF RECORD.--Chemical analyses: April 1973 to October 1973 (discontinued).

REMARKS.--Descriptive location given above is for southernmost point of lake. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, APRIL 1973 TO OCTOBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
APR., 1973											
05...	0945	3.0	6.9	3.9	--	0	--	--	--	--	988
05...	1000	53	4.0	8.9	--	40	--	--	--	--	843
MAY											
23...	1010	3.0	16.0	5.1	20	0	--	--	--	--	761
23...	1020	54	6.0	9.9	9	40	--	--	--	--	822
JULY											
11...	0745	3.0	19.9	3.2	20	20	--	--	--	--	690
11...	0755	52	6.1	12	20	30	--	--	--	--	909
OCT.											
02...	1600	3.0	14.7	7.1	20	20	12	20	450	35	1070
02...	1610	52	6.8	16	30	40	--	--	--	--	1060

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
APR., 1973										
05...	--	810	--	--	.10	.02	.64	3.5	4.1	.44
05...	--	691	--	--	.02	.03	2.4	2.0	4.4	.75
MAY										
23...	119	822	--	--	.15	.02	.28	2.1	2.4	.45
23...	114	864	--	--	.02	.00	2.5	1.6	4.1	.79
JULY										
11...	168	846	--	--	.01	.00	1.5	1.7	3.2	.31
11...	56	839	--	--	.02	.00	4.0	1.0	5.0	1.4
OCT.										
02...	--	878	37	130	.01	.00	.30	3.7	4.0	.36
02...	--	870	--	--	.01	.00	7.1	3.9	11	1.8

DATE	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR (PLATINUM-COBALT UNITS)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
APR., 1973										
05...	.32	--	--	--	--	--	1800	10	6.1	30
05...	.60	--	--	--	--	--	1900	15	--	--
MAY										
23...	.35	--	--	--	--	--	1800	0	.9	28
23...	.72	--	--	--	--	--	1800	0	--	--
JULY										
11...	.16	--	--	--	--	--	1800	20	17	41
11...	.98	--	--	--	--	--	1850	15	--	--
OCT.										
02...	.24	1220	1.66	3	110	0	1850	10	19	43
02...	1.7	--	--	--	--	--	1850	10	--	--

12426000 SPOKANE RIVER BELOW NINE MILE DAM, NEAR SPOKANE, WASH.

LOCATION.--Lat 47°46'34", long 117°32'36", in SE¼SE¼ sec.6, T.26 N., R.42 E., Spokane County, at bridge 500 ft (152 m) downstream from Nine Mile Dam, 5.2 mi (8.4 km) northwest of Spokane, and at mile 58.0 (93.3 km).

DRAINAGE AREA.--5,200 mi² (13,470 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: November 1970 to September 1971, October 1972 to September 1973 (discontinued).

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)
OCT.								
10...	1850	2420	16	5.7	10	.2	.42	.01
31...	1420	2360	16	6.2	10	.2	.48	.01
NOV.								
19...	1620	2420	16	6.1	10	.2	.44	.01
29...	1130	2410	18	7.0	11	.2	.54	.00
DEC.								
12...	1155	4400	10	3.5	8.6	.2	.22	.00
27...	1115	5140	9.7	3.2	8.4	.2	.29	.01
JAN.								
18...	1055	5690	11	3.7	11	.3	.74	.03
FEB.								
06...	1030	5720	10	3.4	9.9	.2	.21	.00
22...	1015	4720	12	4.2	9.8	.2	.38	.01
27...	1215	4320	13	4.8	12	.2	.51	.01
MAR.								
13...	1005	5760	10	3.3	10	.3	.30	.02
27...	0945	5850	10	3.3	9.5	.1	.24	.00
APR.								
10...	1215	5420	11	3.5	9.4	.2	.27	.00
24...	1020	7290	8.8	2.8	9.3	.1	.12	.00
JUNE								
12...	1030	4340	41	3.9	9.6	.2	.25	.01
26...	1030	2350	14	5.0	11	.2	.43	.00
JULY								
11...	1340	170	18	6.9	11	.1	.51	.01
24...	1320	1250	22	9.0	12	.1	.65	.03
AUG.								
06...	1320	1250	29	12	15	.5	.75	.04
20...	1450	3740	25	11	15	.2	.73	.03
SEP.								
11...	1320	2410	14	5.1	10	.1	.32	.01
25...	1330	2410	14	5.1	9.7	.1	.38	.02

124260 SPOKANE RIVER BELOW NINE MILE DAM, NEAR SPOKANE, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)
OCT.									
10...	.41	.23	.64	--	.18	.15	63	140	7.8
31...	.43	.20	.63	.17	.14	.11	65	150	7.8
NOV.									
19...	.42	.24	.66	.20	.18	.14	65	230	7.3
29...	.39	.20	.59	.14	.11	.09	74	140	7.4
DEC.									
12...	.25	.18	.43	.09	.08	.05	39	84	7.0
27...	.22	.23	.45	.15	.07	.05	37	93	6.8
JAN.									
18...	.09	1.1	1.2	.40	.06	.03	43	109	7.0
FEB.									
06...	.10	.14	.24	.06	.04	.01	39	106	7.4
22...	.30	.17	.47	.14	.07	.05	47	140	7.4
27...	.38	.82	1.2	.40	.00	.04	52	130	7.4
MAR.									
13...	.57	.05	.62	.26	.03	.03	39	98	7.3
27...	.13	.09	.22	.07	.05	.02	39	105	7.6
APR.									
10...	.15	.12	.27	.09	.05	.03	42	100	7.6
24...	.13	.14	.27	.06	.04	.02	34	92	7.5
JUNE									
12...	.29	.07	.36	.10	.08	.06	120	113	7.8
26...	.63	.08	.71	.14	.09	.07	56	150	7.7
JULY									
11...	.41	1.3	1.7	.14	.12	.10	73	190	8.0
24...	.62	.28	.90	.25	.23	.21	92	260	7.8
AUG.									
06...	.70	.30	1.0	.34	.07	.04	120	300	7.8
20...	.55	.55	1.1	.26	.19	.19	110	260	7.9
SEP.									
11...	.44	.22	.66	.18	.15	.12	56	140	7.7
25...	.41	.26	.67	.18	.13	.12	56	112	7.6

DATE	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	BIOCHEMICAL OXYGEN DEMAND (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT.								
10...	12.7	19	2	8.8	2.1	4000	100	1.5
31...	8.5	14	2	10.1	2.5	360	<40	2.0
NOV.								
19...	7.8	4	2	10.1	3.0	>4000	>300	5.0
29...	5.8	2	0	10.5	1.5	200	<20	2.0
DEC.								
12...	2.0	15	0	--	2.0	--	--	2.0
27...	4.4	31	24	12.1	.8	2500	90	4.0
JAN.								
18...	3.7	112	130	12.4	2.5	8000	100	13
FEB.								
06...	2.2	15	5	12.7	1.8	200	<40	3.0
22...	3.8	33	23	12.4	3.5	300	<40	4.0
27...	5.6	115	78	10.5	2.8	4000	<100	--
MAR.								
13...	4.4	61	50	12.8	2.0	5000	270	6.0
27...	6.4	12	4	11.6	.4	300	<40	3.0
APR.								
10...	8.2	16	4	11.1	2.0	<200	<40	5.5
24...	8.2	19	3	12.4	2.1	130	<20	5.5
JUNE								
12...	16.2	17	2	9.0	1.2	800	70	6.5
26...	18.0	9	3	7.9	1.1	>1600	>80	13
JULY								
11...	18.4	8	2	7.4	1.8	2000	<20	10
24...	19.2	11	3	5.8	2.0	3600	70	10
AUG.								
06...	19.2	13	5	5.0	1.9	620	30	6.5
20...	18.0	12	3	7.9	1.8	>1600	--	5.0
SEP.								
11...	14.5	13	2	8.5	.2	6000	>80	7.5
25...	14.2	10	3	7.5	1.9	<4000	<100	6.5

12430700 LITTLE SPOKANE RIVER ABOVE WANDERMERE CREEK, AT DARTFORD, WASH.

LOCATION.--Lat 47°47'05", long 117°24'02", in NE¼NW¼ sec.5, T.26 N., R.43 E., Spokane County, at bridge 20 ft (6 m) upstream from Wandermere Creek, 0.2 mi (0.3 km) upstream from gaging station, 0.7 mi (1.1 km) east of Dartford, and at mile 11.6 (18.7 km).

DRAINAGE AREA.--660 mi² (1,709 km²).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)
OCT.								
11...	0800	148	32	8.0	7.4	.2	.54	.00
31...	1510	148	34	8.1	7.6	.2	.60	.00
NOV.								
19...	1525	173	30	7.5	7.1	.2	.64	.00
29...	1040	162	33	7.7	7.7	.2	.70	.00
DEC.								
12...	1230	--	33	8.3	8.9	.2	.81	.01
27...	0955	225	25	6.4	7.8	.2	.68	.01
JAN.								
18...	1000	410	13	3.5	5.4	.3	.48	.01
FEB.								
06...	0935	196	27	6.7	8.2	.2	.72	.01
22...	0930	259	26	6.2	7.1	.2	.74	.02
27...	1100	356	19	5.1	6.3	.2	.80	.02
MAR.								
13...	0915	330	21	5.4	6.5	.2	.33	.02
27...	0905	261	23	5.7	6.1	.1	.48	.01
APR.								
10...	1100	215	26	6.4	6.3	.2	.38	.00
24...	0940	215	26	6.4	6.1	.1	.38	.01
JUNE								
12...	0940	125	29	7.5	6.5	.2	.45	.01
26...	0950	117	30	7.8	8.9	.3	.50	.00
JULY								
11...	1300	96	33	8.6	7.8	.2	.42	.00
24...	1245	80	34	9.4	8.9	.2	.45	.01
AUG.								
06...	1145	79	35	9.4	8.5	.5	.50	.00
20...	1345	82	35	9.7	11	.3	.49	.00
SEP.								
11...	1145	101	35	9.6	7.9	.2	.56	.00
25...	1255	129	32	8.5	8.9	.1	.59	.01

12430700 LITTLE SPOKANE RIVER ABOVE WANDERMERE CREEK, AT DARTFORD, WASH --Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)
OCT.									
11...	.03	.26	.29	--	.02	.01	110	245	8.1
31...	.03	.12	.15	.04	.03	.02	120	240	7.8
NOV.									
19...	.05	.23	.28	.02	.02	.03	110	230	7.7
29...	.09	.22	.31	.04	.03	.03	110	235	7.8
DEC.									
12...	.08	.14	.22	.03	.02	.02	120	210	7.2
27...	.15	.28	.43	.07	.04	.03	89	210	7.3
JAN.									
18...	.16	1.0	1.2	.22	.15	.09	47	130	7.1
FEB.									
06...	.20	.39	.59	.06	.04	.02	95	240	7.9
22...	.74	.66	1.4	.23	.12	.08	90	240	7.7
27...	.57	1.0	1.6	.39	.12	.09	68	180	7.5
MAR.									
13...	.31	.37	.68	.09	.04	.04	75	240	7.3
27...	.09	.09	.18	.05	.03	.01	81	230	8.0
APR.									
10...	.08	.21	.29	.03	.03	.01	91	204	7.8
24...	.08	.24	.32	.04	.02	.01	91	250	7.7
JUNE									
12...	.07	.09	.16	.04	.03	.03	100	240	8.1
26...	.14	.30	.44	.04	.01	.00	110	280	8.2
JULY									
11...	.14	.14	.28	.04	.02	.02	120	280	8.6
24...	.03	.17	.20	.03	.02	.02	120	320	8.5
AUG.									
06...	.08	.32	.40	.06	.01	.00	130	300	8.2
20...	.17	.50	.67	.04	.02	.02	130	320	8.5
SEP.									
11...	.07	.70	.77	.03	.02	.02	130	290	7.9
25...	.08	.42	.50	.04	.03	.01	120	250	8.1

DATE	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	BIOCHEMICAL OXYGEN DEMAND (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT.								
11...	10.0	10	2	9.5	1.0	1600	<40	1.5
31...	5.0	12	1	12.5	.7	640	<20	2.0
NOV.								
19...	6.6	8	1	10.1	1.5	4000	<20	2.0
29...	2.3	2	1	12.4	.3	250	<20	3.0
DEC.								
12...	4.2	10	0	--	.2	40	<20	2.0
27...	4.4	36	13	11.8	.8	4000	80	4.5
JAN.								
18...	1.0	90	25	--	4.6	6000	250	9.5
FEB.								
06...	1.4	38	6	12.4	1.8	5000	<40	4.5
22...	3.4	70	30	12.1	4.3	2000	90	9.0
27...	5.1	149	40	12.0	4.6	16000	64	--
MAR.								
13...	4.4	59	20	10.0	.4	540	<40	11
27...	6.0	33	4	10.0	.6	200	<40	4.5
APR.								
10...	11.0	30	3	10.7	1.8	640	<40	4.5
24...	11.2	33	2	10.8	2.4	700	33	5.5
JUNE								
12...	17.0	31	2	9.5	1.3	500	<20	6.5
26...	18.4	20	2	9.9	1.6	400	35	12
JULY								
11...	19.6	15	1	10.0	.8	>1600	<20	6.0
24...	19.0	17	3	7.6	1.1	3100	20	7.0
AUG.								
06...	18.6	16	2	9.4	.9	660	35	9.5
20...	17.5	18	2	11.7	1.8	340	--	4.5
SEP.								
11...	12.5	12	1	8.6	.1	600	25	7.0
25...	13.0	27	2	9.3	.6	>8000	>80	5.5

12431900 LITTLE SPOKANE RIVER AT MOUTH, NEAR SPOKANE, WASH.

LOCATION.--Lat 47°47'00", long 117°31'44", in SE¼NW¼ sec.5, T.26 N., R.42 E., Spokane County, at Tumtum Road bridge, 5.3 mi (8.5 km) northwest of Spokane, and at mile 1.1 (1.8 km).

DRAINAGE AREA.--700 mi² (1,813 km²).

PERIOD OF RECORD.--Chemical analyses: November 1970 to September 1971, October 1972 to September 1973 (discontinued).

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)
OCT.								
11...	0700	390	30	12	13	.2	.93	.00
31...	1540	395	33	12	12	.2	.96	.00
NOV.								
19...	1720	415	30	12	12	.2	.93	.06
29...	1145	410	31	12	20	.2	1.0	.00
DEC.								
12...	1050	390	32	13	13	.1	1.0	.00
27...	1150	490	28	11	12	.1	.94	.01
JAN.								
18...	1145	700	8.6	3.8	12	.8	3.6	.07
FEB.								
06...	1105	440	29	11	13	.2	.94	.01
22...	1100	470	29	11	12	.1	.98	.02
27...	1245	650	23	9.0	10	.2	.89	.01
MAR.								
13...	1035	605	26	8.9	10	.2	.60	.01
27...	1015	520	26	9.9	11	.1	.85	.01
APR.								
10...	1240	465	28	11	11	.2	.81	.00
24...	1050	465	28	11	11	.1	.82	.00
JUNE								
12...	1045	360	29	12	12	.1	1.0	.00
26...	1050	360	30	13	14	.2	.93	.00
JULY								
11...	1350	330	31	13	14	.1	.97	.00
24...	1335	310	32	13	13	.1	1.0	.01
AUG.								
06...	1350	300	31	14	13	.5	.92	.00
20...	1515	310	32	14	16	.2	1.0	.01
SEP.								
11...	1345	330	32	13	14	.1	.94	.00
25...	1350	370	31	13	13	.1	.96	.01

12431900 LITTLE SPOKANE RIVER AT MOUTH, NEAR SPOKANE, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	AMMONIA NITRO-GEN (N) (MG/L)	ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED-PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT.									
11...	.03	.19	.22	--	.00	.01	120	245	8.0
31...	.03	.17	.20	.03	.02	.01	130	260	8.2
NOV.									
19...	.03	.42	.45	.02	.01	.01	120	235	7.6
29...	.08	.10	.18	.02	.02	.01	130	240	7.8
DEC.									
12...	.04	.06	.10	.01	.01	.01	130	240	7.6
27...	.08	.19	.27	.07	.03	.03	120	250	7.3
JAN.									
18...	.14	3.3	3.4	2.7	.11	.04	37	150	7.5
FEB.									
06...	.10	.24	.34	.05	.02	.00	120	280	7.9
22...	.26	.32	.58	.08	.05	.03	120	280	7.8
27...	.37	1.0	1.4	.10	.08	.07	95	230	7.6
MAR.									
13...	.24	.34	.58	.07	.03	.03	100	105	7.5
27...	.07	.08	.15	.04	.01	.01	110	265	7.6
APR.									
10...	.09	.09	.18	.01	.01	.01	120	248	7.8
24...	.07	.14	.21	.02	.01	.00	120	290	7.7
JUNE									
12...	.04	.10	.14	.03	.02	.01	120	260	8.0
26...	.27	.25	.52	.02	.00	.00	130	300	8.2
JULY									
11...	.05	.26	.31	.01	.01	.01	130	300	8.3
24...	.01	.16	.17	.01	.01	.01	130	233	8.3
AUG.									
06...	.03	.12	.15	.03	.01	.01	140	320	8.1
20...	.10	.31	.41	.02	.02	.01	140	310	8.4
SEP.									
11...	.06	.20	.26	.02	.01	.01	130	300	8.3
25...	.06	.24	.30	.02	.01	.00	130	310	8.1

DATE	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	BIO-CHEM-ICAL OXYGEN DEMAND (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)	FECAL COLI-FORM (COL. PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT.								
11...	10.0	18	4	8.7	.7	1200	<40	1.5
31...	7.5	6	1	11.7	.7	550	<20	1.0
NOV.								
19...	8.3	0	1	12.2	.8	400	<20	6.0
29...	6.0	6	1	10.5	.4	450	60	1.0
DEC.								
12...	.8	6	0	--	.8	200	<40	1.0
27...	6.6	23	13	9.9	.6	3250	60	4.5
JAN.								
18...	1.6	100	35	11.3	3.6	6000	300	67
FEB.								
06...	4.2	22	4	10.0	1.2	5000	<40	4.0
22...	6.0	27	15	10.4	1.6	1500	50	4.0
27...	7.0	84	29	11.9	3.2	12000	<100	12
MAR.								
13...	6.2	42	15	12.2	1.2	470	40	5.0
27...	8.3	22	5	12.0	1.2	260	<40	3.0
APR.								
10...	11.8	17	2	10.6	1.0	400	<40	3.0
24...	11.5	22	2	9.4	--	250	<20	4.5
JUNE								
12...	14.4	12	2	8.8	.7	500	20	6.5
26...	15.2	20	2	8.6	.5	1000	40	10
JULY								
11...	16.0	7	2	9.6	.4	1000	<20	5.0
24...	15.2	8	2	9.7	.5	280	<20	6.0
AUG.								
06...	15.0	7	2	9.5	.7	500	5	4.5
20...	15.4	9	3	10.8	.3	220	--	2.5
SEP.								
11...	9.8	6	1	8.5	--	100	<20	5.0
25...	12.0	12	3	9.1	.9	--	40	6.5

12433000 SPOKANE RIVER AT LONG LAKE, WASH.

LOCATION.--Lat 47°50'18", long 117°51'05", in NW¼SE¼ sec.14, T.27 N., R.39 E., Lincoln County, at bridge on Spring Creek Road (State Highway 231), 0.6 mi (1.0 km) downstream from gaging station at Long Lake powerhouse, 0.8 mi (1.3 km) upstream from Chamokane Creek, 12 mi (19.3 km) north of Reardon, and at mile 33.3 (53.6 km).

DRAINAGE AREA.--6,020 mi² (15,590 km²), approximately (at gaging station).

PERIOD OF RECORD.--Chemical analyses: July 1959 to September 1973.
Water temperatures: July 1959 to September 1962, October 1966 to September 1970, March 1973 to September 1973.

EXTREMES.--March to September 1973:
Specific conductance: Maximum, 235 micromhos Sept. 8; minimum, 103 micromhos May 17, 18, 19.
Water temperatures: Maximum, 21.5°C July 15; minimum, 5.5°C Apr. 13, 14, 27, 28.

Period of record:
Water temperatures: Maximum, 24.5°C Aug. 18, 1959; minimum, freezing point Jan. 21, Feb. 26, 1960.

REMARKS.--No inflow between sampling point and gaging station. Dissolved oxygen, pH, turbidity, color, specific conductance, and coliform data furnished by the Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
OCT.												
11...	0915	4630	--	19	7.7	--	--	--	--	--	11	--
31...	1625	3760	--	19	7.3	--	--	--	--	--	10	--
NOV.												
19...	1845	2600	--	20	7.5	--	--	--	--	--	11	--
29...	1245	3660	--	19	7.6	--	--	--	--	--	10	--
DEC.												
12...	1405	5620	--	20	7.7	--	--	--	--	--	10	--
27...	1255	5590	--	19	7.3	--	--	--	--	--	11	--
JAN.												
18...	1230	7250	--	12	4.3	--	--	--	--	--	9.7	--
31...	1100	--	9.4	11	3.9	.7	.1	50	0	41	11	4.0
FEB.												
06...	1220	6160	--	11	3.9	--	--	--	--	--	8.7	--
22...	1200	5870	--	11	3.8	--	--	--	--	--	9.1	--
27...	1340	5890	--	12	4.3	--	--	--	--	--	10	--
28...	1030	--	--	--	--	--	--	--	--	--	--	--
MAR.												
13...	1145	6090	--	14	5.1	--	--	--	--	--	10	--
27...	1115	7560	--	13	4.5	--	--	--	--	--	9.9	--
28...	1130	--	9.7	13	4.4	3.4	1.5	57	0	47	13	2.3
APR.												
10...	1340	5900	--	13	4.4	--	--	--	--	--	9.5	--
23...	1030	--	8.4	14	4.6	3.0	1.1	55	0	45	11	1.6
24...	1150	5980	--	13	4.3	--	--	--	--	--	9.7	--
MAY												
21...	1000	--	6.9	11	3.7	2.8	1.1	47	0	39	12	1.2
JUNE												
12...	1150	5020	--	11	4.1	--	--	--	--	-	9.1	--
25...	0915	--	7.6	13	4.7	3.2	1.2	60	0	49	10	2.1
26...	1130	5100	--	13	4.6	--	--	--	--	--	11	--
JULY												
11...	1440	5010	--	14	5.1	--	--	--	--	--	10	--
23...	0915	--	5.7	16	5.7	3.6	1.2	75	0	62	11	2.7
24...	1415	2570	--	15	5.8	--	--	--	--	--	9.9	--
AUG.												
06...	1440	3850	--	17	6.5	--	--	--	--	--	10	--
20...	1600	3750	--	20	7.9	--	--	--	--	--	13	--
21...	0932	--	9.4	20	7.6	4.8	1.4	101	0	83	11	3.0
SEP.												
11...	1430	5100	--	22	8.9	--	--	--	--	--	11	--
25...	0930	--	8.0	21	8.1	6.8	1.7	99	0	81	12	4.5
25...	1435	5010	--	20	8.1	--	--	--	--	--	10	--

12433000 SPOKANE RIVER AT LONG LAKE, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)	ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOL-VED-PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	HARD-NESS (CA,MG) (MG/L)
OCT.												
11...	.2	.51	.02	.15	.44	.59	.04	.03	.03	--	--	79
31...	.2	.46	.01	.22	.13	.35	.11	.05	.04	--	--	77
NOV.												
19...	.1	.49	.01	.24	.14	.38	.05	.04	.04	--	--	81
29...	.2	.54	.01	.20	.11	.31	.07	.06	.04	--	--	79
DEC.												
12...	.2	.50	.01	.25	.13	.38	.05	.05	.04	--	--	82
27...	.1	.58	.01	.30	.11	.41	.09	.08	.08	--	--	77
JAN.												
18...	.5	.45	.01	.22	.47	.69	.17	.07	.04	--	--	48
31...	.2	.44	.01	--	--	.58	.15	--	--	100	74	44
FEB.												
06...	.2	.34	.01	.22	.17	.39	.08	.04	.03	--	--	43
22...	.2	.30	.01	.20	.08	.28	.05	.05	.03	--	--	43
27...	.2	.33	.00	.16	.13	.29	.06	.04	.04	--	--	48
28...	--	.33	.01	.16	.15	.31	.12	--	--	--	--	--
MAR.												
13...	.4	.45	.02	.45	.37	.82	.14	.50	.05	--	--	56
27...	.1	.46	.01	.24	.07	.31	.08	.03	.00	--	--	51
28...	.1	--	.03	.16	.13	.29	.06	--	--	94	76	51
APR.												
10...	.2	.30	.00	.15	.17	.32	.06	.03	.01	--	--	51
23...	.0	.38	.01	.21	.09	.30	.04	--	--	72	71	54
24...	.1	.25	.01	.22	.13	.35	.06	.03	.02	--	--	50
MAY												
21...	.0	--	--	--	--	.24	.02	--	.01	77	62	43
JUNE												
12...	.2	.10	.01	.12	.06	.18	.03	.02	.02	--	--	44
25...	.1	.31	.00	--	--	.33	.09	--	--	79	71	52
26...	.2	.25	.01	.43	--	--	.04	.02	.01	--	--	51
JULY												
11...	.2	.27	.01	.13	.30	.43	.05	.03	.03	--	--	56
23...	.1	.29	.00	.14	--	.07	.08	--	.03	92	83	63
24...	.1	.22	.00	.09	.21	.30	.03	.03	.03	--	--	61
AUG.												
06...	.5	.31	.01	.15	.19	.34	--	.28	.26	--	--	69
20...	.2	.40	.01	.32	1.3	1.6	.13	.07	.07	--	--	82
21...	.0	.74	.02	.06	.43	.49	.12	--	.12	110	107	81
SEP.												
11...	.1	.21	.05	.38	.26	.64	.14	.09	.09	--	--	92
25...	.1	.36	.02	--	--	.38	.14	--	--	114	111	86
25...	.0	.30	.02	.41	.28	.69	.18	.11	.07	--	--	83

12433000 SPOKANE RIVER AT LONG LAKE, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	NON-CARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	BIOCHEMICAL OXYGEN DEMAND (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)
OCT.												
11...	--	140	7.9	13.2	7	2	6.8	2.0	--	450	<40	.0
31...	--	165	7.8	10.5	7	2	7.5	.9	--	200	<20	1.0
NOV.												
19...	--	185	7.3	8.2	10	1	7.7	1.2	--	<100	<20	4.0
29...	--	170	7.5	7.6	4	1	8.7	.5	--	<40	<20	1.0
DEC.												
12...	--	150	7.4	3.4	6	0	--	.4	--	<40	<20	1.0
27...	--	180	7.1	3.7	6	3	9.4	.6	--	40	<20	2.0
JAN.												
18...	--	130	7.0	2.8	52	45	11.8	1.8	--	6000	200	6.0
31...	3	100	8.2	4.2	--	35	--	--	.5	260	22	5.0
FEB.												
06...	--	120	7.6	3.0	30	18	11.0	2.5	--	200	<40	2.5
22...	--	130	7.3	3.7	14	5	11.3	.6	--	<200	<40	3.0
27...	--	120	7.3	4.8	11	4	11.0	1.4	--	<100	<40	6.5
28...	--	97	8.5	4.0	--	4	--	--	--	2	<1	2.0
MAR.												
13...	--	150	7.3	5.4	47	25	10.2	1.4	--	100	<40	12
27...	--	--	7.8	--	88	10	11.0	1.2	--	<100	<40	3.5
28...	4	--	9.0	--	--	10	--	--	.1	10	--	--
APR.												
10...	--	--	7.5	9.2	19	5	10.9	2.2	--	<40	<40	2.5
23...	9	--	7.4	8.8	--	7	--	--	3.5	5	5	50
24...	--	--	7.4	--	19	4	9.4	1.8	--	70	<20	5.5
MAY												
21...	4	--	7.0	12.5	--	3	--	--	7.5	--	--	--
JUNE												
12...	--	--	8.0	--	22	4	9.9	1.6	--	<40	<20	3.5
25...	3	138	6.6	15.5	--	3	--	--	24	9	1	--
26...	--	140	7.9	--	10	1	8.9	2.2	--	<20	<20	8.5
JULY												
11...	--	--	8.2	--	10	2	7.7	1.8	--	<20	<20	5.0
23...	2	149	7.7	19.0	--	--	--	--	2.4	350	2	4.0
24...	--	--	8.5	20.1	9	2	6.8	1.6	--	>80	<20	10
AUG.												
06...	--	180	7.6	20.4	11	2	4.8	1.6	--	20	1	5.0
20...	--	220	7.9	--	14	4	6.5	1.8	--	>80	--	3.0
21...	0	221	7.5	18.0	--	4	--	--	5.1	16	13	--
SEP.												
11...	--	--	7.9	--	23	2	6.5	.5	--	>1600	<20	4.0
25...	5	194	6.7	15.8	--	6	--	--	32	--	0	--
25...	--	--	7.6	15.9	31	4	3.8	2.9	--	28000	<20	7.5

SPOKANE RIVER BASIN

12433000 SPOKANE RIVER AT LONG LAKE, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	TOTAL IRON (FE) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)
JAN. 31...	1100	490	70	10	2	20	30	0
APR. 23...	1030	400	100	50	1	10	0	0
JULY 23...	0915	100	50	0	0	<10	0	0

DATE	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)
JAN. 31...	60	8	200	3	.0	3	430
APR. 23...	30	5	<100	7	--	3	150
JULY 23...	20	10	50	8	.0	3	60

DATE	TIME	DIS-SOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUS-PENDED GROSS ALPHA AS U-NAT. (UG/L)	DIS-SOLVED GROSS BETA AS CS-137 (PC/L)	SUS-PENDED GROSS BETA AS CS-137 (PC/L)	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUS-PENDED GROSS BETA AS SR90 /Y90 (PC/L)	DIS-SOLVED RA-226 (RADON METHOD) (PC/L)	DIS-SOLVED URANIUM (U) (UG/L)
OCT. 02...	1530	2.1	<.4	2.2	<.4	1.8	<.4	--	1.2
NOV. 06...	1400	1.8	<.4	2.3	.5	1.8	.5	.04	.74
DEC. 11...	1010	2.0	<.4	2.3	.6	1.8	.6	.04	--
JAN. 29...	0915	<.5	4.3	2.6	2.5	2.0	2.1	.04	.04
MAR. 19...	1100	1.1	1.1	2.1	1.2	1.6	1.0	.04	.37
MAY 11...	1600	.9	.4	1.7	.5	1.3	.5	.02	.13
JUNE 11...	1605	<.7	<.4	1.8	.4	1.4	.4	.03	.16
AUG. 01...	0910	1.5	.4	2.3	<.4	1.9	<.4	.03	.43
SEP. 04...	1600	3.6	<.4	2.7	<.4	2.1	<.4	.05	1.0

12433000 SPOKANE RIVER AT LONG LAKE, WASH.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), MARCH 1973 TO SEPTEMBER 1973

	FEBRUARY			MARCH			APRIL			MAY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	139	139	139	116	115	115
2	---	---	---	---	---	---	138	138	138	115	114	114
3	---	---	---	---	---	---	138	137	137	113	112	113
4	---	---	---	---	---	---	137	136	137	111	110	111
5	---	---	---	---	---	---	136	136	136	110	109	109
6	---	---	---	---	---	---	136	135	135	109	108	108
7	---	---	---	---	---	---	134	133	134	109	107	108
8	---	---	---	---	---	---	134	132	133	107	107	107
9	---	---	---	---	---	---	133	132	132	107	106	106
10	---	---	---	---	---	---	132	131	131	106	105	106
11	---	---	---	---	---	---	131	130	130	106	105	105
12	---	---	---	---	---	---	131	130	130	106	105	105
13	---	---	---	---	---	---	130	130	130	106	105	105
14	---	---	---	---	---	---	130	129	129	106	104	105
15	---	---	---	---	---	---	130	129	129	106	104	105
16	---	---	---	---	---	---	131	129	130	105	104	104
17	---	---	---	---	---	---	130	129	129	105	103	104
18	---	---	---	---	---	---	131	129	130	105	103	104
19	---	---	---	---	---	---	131	130	130	105	103	104
20	---	---	---	---	---	---	131	130	130	105	104	104
21	---	---	---	---	---	---	131	130	130	106	105	105
22	---	---	---	---	---	---	130	129	130	107	105	106
23	---	---	---	151	150	150	129	128	129	111	106	108
24	---	---	---	150	148	149	128	127	128	108	108	108
25	---	---	---	148	146	148	128	126	127	108	107	108
26	---	---	---	146	145	146	126	125	126	107	106	107
27	---	---	---	146	144	145	124	122	123	108	107	107
28	---	---	---	144	142	143	122	119	120	108	107	108
29	---	---	---	142	141	142	118	117	117	109	107	108
30	---	---	---	142	141	141	117	116	117	113	108	109
31	---	---	---	140	139	140	---	---	---	111	110	110
MONTH	---	---	---	---	---	---	139	116	130	116	103	107

	JUNE			JULY			AUGUST			SEPTEMBER		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	111	110	110	143	136	139	168	164	165	233	228	230
2	112	111	111	143	138	140	173	166	169	228	224	226
3	113	111	112	144	138	140	175	170	173	230	222	225
4	114	112	113	143	139	141	179	173	175	230	220	225
5	115	113	114	143	139	140	185	176	179	229	223	226
6	116	114	115	144	139	141	188	180	184	228	223	225
7	119	117	118	144	139	142	188	183	186	233	222	226
8	122	119	120	144	140	141	190	186	188	235	231	232
9	123	121	122	144	141	142	194	188	190	231	223	227
10	124	122	123	144	140	142	197	189	193	224	218	221
11	125	123	124	146	140	143	201	188	196	227	219	223
12	125	124	124	154	142	145	205	200	202	232	225	228
13	126	125	125	147	142	144	221	195	200	232	228	230
14	129	127	128	158	143	148	203	197	199	229	220	224
15	131	127	129	171	144	151	205	188	200	231	220	227
16	132	129	131	171	142	151	206	202	204	233	228	229
17	132	129	131	146	143	145	218	205	212	227	224	225
18	132	131	132	148	143	145	221	214	218	224	221	222
19	133	132	132	152	145	147	226	219	221	223	215	220
20	135	133	134	151	145	148	224	220	221	218	210	214
21	137	134	135	152	147	149	227	220	223	212	190	206
22	138	136	137	168	148	153	227	222	224	210	205	207
23	138	137	137	154	146	149	226	220	223	206	195	201
24	146	137	141	152	148	150	228	215	222	200	195	197
25	150	138	141	155	150	152	233	225	229	200	193	196
26	142	137	138	159	153	155	233	227	229	198	192	195
27	142	137	138	162	158	159	227	216	222	198	192	194
28	141	137	138	162	159	160	232	218	226	195	190	192
29	142	136	138	168	157	161	230	227	229	197	191	195
30	140	136	137	178	162	167	227	222	224	197	193	195
31	---	---	---	166	163	164	232	219	225	---	---	---
MONTH	150	110	128	178	136	148	233	164	205	235	190	216

12433000 SPOKANE RIVER AT LONG LAKE, WASH.--Continued

TEMPERATURE (°C) OF WATER, MARCH 1973 TO SEPTEMBER 1974

MARCH

DAY	MAX	MIN	DAY	MAX	MIN	DAY	MAX	MIN
23	9.0	7.5	26	9.5	7.5	29	10.0	7.0
24	10.0	8.0	27	10.0	8.0	30	9.5	7.5
25	10.5	7.5	28	10.5	7.5	31	10.5	9.0

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	10.0	9.0	10.5	8.0	14.5	12.5	16.5	15.5	21.0	19.0	18.5	17.5
2	10.0	7.0	10.0	8.0	14.5	13.0	17.5	16.5	20.5	18.5	19.0	17.5
3	10.0	6.5	11.0	8.5	15.5	13.5	18.0	17.0	20.5	18.5	18.5	17.5
4	9.5	7.0	11.5	10.5	15.0	13.5	18.0	16.5	21.0	18.5	17.5	17.0
5	9.5	6.0	12.0	10.0	15.5	14.0	17.0	16.5	21.0	20.0	18.0	17.0
6	8.0	6.0	11.5	7.5	15.0	14.5	17.5	16.5	20.5	18.0	18.0	17.0
7	9.0	6.5	10.5	8.0	16.5	14.5	18.5	16.5	20.0	18.0	18.0	17.0
8	9.0	6.5	11.5	8.5	16.0	14.0	18.5	17.0	20.5	18.5	18.5	17.0
9	9.0	7.0	11.0	8.5	15.5	14.0	18.0	17.0	20.0	19.0	18.0	17.5
10	9.5	7.5	11.5	9.5	15.0	14.0	18.0	16.5	20.0	18.5	18.0	17.0
11	10.0	7.5	12.0	9.5	16.0	14.5	18.0	16.5	20.0	19.0	18.0	16.5
12	10.5	7.5	12.0	10.5	16.0	15.0	19.0	17.0	20.0	19.5	17.5	16.5
13	9.5	5.5	12.0	10.5	17.0	15.0	19.5	18.0	20.0	18.5	17.5	16.5
14	8.5	5.5	11.5	11.0	16.5	15.0	20.0	19.0	20.0	18.5	18.5	16.5
15	10.5	7.0	12.5	11.0	15.0	14.5	21.5	19.0	19.5	18.5	18.0	17.5
16	11.0	9.5	13.0	10.5	16.0	14.5	21.0	18.0	20.0	18.0	18.0	17.0
17	10.0	8.0	12.5	10.5	16.5	15.5	19.0	18.5	18.5	17.5	17.5	16.5
18	10.0	8.5	12.0	11.0	17.0	15.0	19.5	18.5	19.0	17.5	17.5	16.5
19	10.5	9.0	13.0	11.0	16.5	15.0	19.5	18.5	19.5	18.0	17.5	17.0
20	10.5	6.5	11.5	11.0	16.5	15.0	19.5	19.0	19.0	18.0	17.5	16.5
21	9.5	6.5	13.5	11.5	16.0	15.5	20.0	19.0	19.0	18.0	17.0	16.5
22	9.0	6.0	14.0	13.0	16.5	15.0	20.0	19.0	19.0	17.5	17.0	16.5
23	9.0	6.5	14.0	13.0	16.0	15.5	20.5	18.0	18.5	17.5	16.5	16.0
24	9.0	7.0	15.5	13.5	16.5	15.0	20.0	19.0	18.0	17.0	16.5	15.5
25	9.5	7.0	15.5	13.5	16.5	15.5	20.0	19.0	18.5	17.0	16.0	14.5
26	9.5	7.0	15.0	13.5	17.0	15.5	19.5	19.0	19.0	17.5	15.5	14.5
27	8.5	5.5	15.5	14.0	17.0	15.5	20.0	19.0	18.5	17.0	15.5	14.5
28	7.5	5.5	15.5	13.5	16.0	15.0	20.0	18.5	18.0	17.0	16.0	14.5
29	9.0	7.0	15.5	13.5	16.0	14.5	20.0	19.0	18.5	17.5	15.5	14.5
30	10.5	8.0	15.5	14.0	16.5	15.5	20.0	18.0	18.5	17.5	15.5	14.5
31	---	---	14.5	12.5	---	---	21.0	18.5	18.5	17.5	---	---
MONTH	11.0	5.5	15.5	7.5	17.0	12.5	21.5	15.5	21.0	17.0	19.0	14.5

12433890 SANPOIL RIVER ABOVE THIRTEENMILE CREEK NEAR REPUBLIC, WASH.

LOCATION.--Lat 48°28'37", long 118°43'41", in SE¼NW¼ sec.1, T.34 N., R.32 E., Ferry County, Colville Indian Reservation, at State Highway 21 crossing, 0.1 mile (0.16 kilometer) upstream from Thirteenmile Creek, 1.6 miles (2.6 kilometers) northeast of West Fork, and 12 miles (19.3 kilometers) south of Republic.

DRAINAGE AREA.--About 265 mi^2 (686 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
10...	1535	41	3.4	--	--	--	--
16...	1530	121	6.5	--	13	32	10
25...	1045	156	2.1	172	--	--	--
APR.							
06...	1630	210	6.3	--	24	88	50
18...	1145	139	4.2	169	6	12	4.5
MAY							
04...	1625	122	10.8	--	--	--	--
16...	1340	147	11.0	149	8	20	7.9
23...	1510	242	12.5	--	8	47	31
JUNE							
16...	1240	92	13.6	170	4	19	4.7
JULY							
12...	1650	33	13.4	208	2	4	.36
27...	1345	19	16.9	216	2	3	.15
AUG.							
18...	1015	27	11.8	218	3	8	.58
SEP.							
13...	1325	10	12.2	235	2	1	.03
OCT.							
13...	1100	12	5.0	--	2	--	--
17...	1230	12	4.7	240	2	1	.03
NOV.							
15...	1230	15	4.8	242	2	2	.08
DEC.							
13...	1110	3.5	.5	215	1	0	.00
JAN., 1973							
18...	1435	24	1.5	200	5	11	.71
FEB.							
14...	0910	11	1.0	238	1	8	.24

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
25...	21	5.5	7.7	1.4	89	73	16	2.1	.41	.010	.14
JUNE											
16...	22	4.9	6.0	1.3	93	76	12	.9	1.0	.010	.30
SEP.											
13...	31	7.0	8.6	1.5	138	113	16	1.6	.90	.020	.03
DEC.											
13...	29	6.6	8.0	1.4	122	100	14	1.9	.04	.000	.04

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
25...	.26	--	.11	75	2	--	--	--	--	--	--
JUNE											
16...	.10	.060	.080	75	0	70	0	1	2	.8	20
SEP.											
13...	.01	.060	--	110	0	4	0	0	5	.9	0
DEC.											
13...	.25	.067	.067	100	0	<1	--	--	--	--	--

12433896 THIRTEENMILE CREEK NEAR REPUBLIC, WASH.

LOCATION.--Lat 48°28'38", long 118°43'41", in SE¼NW¼ sec.1, T.34 N., R.32 E., Ferry County, Colville Indian Reservation, at road crossing 0.1 mile (0.16 kilometer) upstream from mouth and 11.9 miles (19.2 kilometers) south of Republic.

DRAINAGE AREA.--16.9 mi^2 (43.8 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
10...	1645	9.1	1.0	--	--	--	--
16...	1745	35	3.7	--	31	16	1.5
25...	1055	--	1.6	75	--	--	--
APR.							
06...	1735	27	4.0	--	9	14	1.0
18...	1230	18	3.0	77	6	5	.24
MAY							
04...	1630	12	7.4	--	--	--	--
16...	1450	12	8.2	68	5	6	.19
23...	1520	24	8.4	--	9	15	.97
JUNE							
16...	1245	5.0	10.8	84	31	3	.04
JULY							
12...	1710	1.2	10.5	110	1	4	.01
AUG.							
18...	1030	.41	9.1	118	2	1	.00
NOV.							
15...	1235	.05	4.3	--	--	--	--
JAN., 1973							
18...	1400	.75	1.5	109	2	1	.00
FEB.							
14...	0845	<.05	.0	112	1	8	--

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
25...	8.6	1.8	3.9	.9	45	37	3.7	1.1	.31	.010	.06
JUNE											
16...	11	2.8	4.0	.9	57	47	5.7	.1	1.5	.010	.16

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
25...	.08	--	.12	29	0	--	--	--	--	--	--
JUNE											
16...	.07	.080	.090	39	0	14	0	0	1	.4	10

12433995 LOST CREEK NEAR DISAUTEL, WASH.

LOCATION.--Lat 48°28'26", long 119°01'49", in NE¼SW¼ sec.3, T.34 N., R.30 E., Okanogan County, Colville Indian Reservation, 1.0 mile (1.6 kilometers) downstream from Loony Creek and 12.5 miles (20.1 kilometers) northeast of Disautel.

DRAINAGE AREA.--71.0 mi^2 (184 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
17...	1125	17	4.0	--	6	18	.83
25...	1300	26	1.0	68	--	--	--
APR.							
20...	1345	34	5.6	65	4	14	1.3
MAY							
16...	1630	124	9.3	46	8	51	17
JUNE							
13...	1515	45	10.5	73	5	22	2.7
JULY							
13...	1305	11	14.6	100	1	4	.12
AUG.							
17...	1400	6.7	13.4	128	2	2	.04
SEP.							
20...	0720	3.4	5.0	122	2	1	.01
OCT.							
18...	1200	3.2	4.0	148	2	4	.03
NOV.							
15...	1500	5.2	2.8	128	2	2	.03
DEC.							
14...	0750	1.8	.2	180	3	2	.01
JAN., 1973							
19...	0945	4.0	.0	140	2	6	.06
FEB.							
15...	1350	3.4	1.5	150	2	1	.01

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
25...	7.3	1.7	4.8	1.3	38	31	4.7	1.3	.38	.010	.11
JUNE											
13...	7.8	1.6	3.5	1.0	42	34	4.3	.7	.43	.020	.10
SEP.											
20...	18	4.2	7.5	2.1	93	76	7.1	1.0	.06	.000	.05
DEC.											
14...	21	5.1	9.0	2.2	107	88	7.1	1.9	.10	.000	.07

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
25...	.10	--	.040	25	0	--	--	--	--	--	--
JUNE											
13...	.02	.010	.020	26	0	88	0	0	0	.0	0
SEP.											
20...	.01	.020	.020	62	0	36	0	0	3	.4	0
DEC.											
14...	.21	.020	.029	73	0	4	--	--	--	--	--

12434100 GOLD CREEK NEAR REPUBLIC, WASH.

LOCATION.--Lat 48°27'18", long 118°47'56", in NW¼NW¼ sec.16, T.34 N., R.32 E., Ferry County, Colville Indian Reservation, 13.4 miles (21.6 kilometers) southwest of Republic.

DRAINAGE AREA.--47.4 mi^2 (123 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
APR., 1972							
18...	1415	105	5.7	66	3	14	4.0
MAY							
16...	1125	78	8.0	66	3	16	3.4
JUNE							
16...	1320	31	13.3	82	1	2	.17
JULY							
12...	1505	12	12.4	132	1	2	.06
AUG.							
18...	0850	10	10.7	146	2	4	.11
SEP.							
13...	1400	5.3	11.9	161	1	0	.00
OCT.							
17...	1310	5.2	4.0	164	2	0	.00
NOV.							
15...	1130	6.0	4.3	158	2	2	.03
DEC.							
13...	0955	4.3	.0	170	1	0	.00
JAN., 1973							
18...	1310	10	.0	143	1	2	.05
FEB.							
14...	1020	5.8	1.0	155	0	6	.09

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
JUNE, 1972											
16...	13	2.2	2.5	.9	54	44	8.8	.1	.93	.010	.09
SEP.											
13...	24	3.6	4.0	1.0	93	76	13	.6	.05	.010	.02
DEC.											
13...	26	3.9	3.9	1.1	91	74	14	.9	.02	.000	.01

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
JUNE, 1972											
16...	.06	.000	.020	41	0	4	0	0	2	.0	10
SEP.											
13...	.02	.010	.010	75	0	1	0	0	3	.9	0
DEC.											
13...	.15	.007	.009	81	6	1	--	--	--	--	--

12434110 WEST FORK SANPOIL RIVER NEAR REPUBLIC, WASH.

LOCATION.--Lat 48°27'33", long 118°44'57", in NE¼SW¼ sec.11, T.34 N., R.32 E., Ferry County, Colville Indian Reservation, at State Highway 21 crossing at West Fork, 0.3 mile (0.5 kilometer) upstream from mouth and 13 miles (20.9 kilometers) south of Republic.

DRAINAGE AREA.--308 mi^2 (798 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
16...	1500	153	5.4	--	10	30	12
25...	1040	144	2.0	88	--	--	--
APR.							
18...	1500	190	6.5	92	3	25	13
MAY							
16...	1230	284	10.0	74	5	32	25
JUNE							
16...	1010	102	13.1	125	2	8	2.2
16...	1400	102	--	130	--	--	--
JULY							
12...	1420	35	13.1	174	1	2	.19
26...	1800	20	20.1	193	2	2	.11
AUG.							
18...	0835	29	11.2	192	2	6	.47
SEP.							
13...	1440	12	12.5	214	1	0	.00
OCT.							
17...	1400	14	4.0	217	2	1	.04
NOV.							
15...	1045	18	4.3	203	2	2	.10
DEC.							
18...	1645	12	.0	165	0	4	.13
JAN., 1973							
18...	1150	27	.0	170	2	6	.44
FEB.							
14...	1145	15	1.0	208	0	6	.24

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
25...	11	2.0	3.9	1.2	47	39	6.2	1.2	.20	.000	.05
JUNE											
16...	16	2.9	5.0	1.3	70	57	8.2	.3	1.0	.010	.15
SEP.											
13...	30	5.2	6.9	1.6	120	98	17	.9	.04	.010	.02
DEC.											
18...	28	5.4	6.5	1.7	113	92	19	1.0	.18	.000	.03

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
25...	.10	--	.040	36	0	--	--	--	--	--	--
JUNE											
16...	.03	.020	.040	52	0	22	0	0	2	.1	0
SEP.											
13...	.01	.010	--	96	0	3	0	0	5	.9	0
DEC.											
18...	.16	.017	.022	92	0	6	--	--	--	--	--

12434120 SEVENTEENMILE CREEK NEAR REPUBLIC, WASH.

LOCATION.--Lat 48°26'19", long 118°44'11", in NE¼NE¼ sec.23, T.34 N., R.32 E., Ferry County, Colville Indian Reservation, at mouth, 1.5 miles (2.4 kilometers) south of West Fork and 16.5 miles (26.6 kilometers) south of Republic.

DRAINAGE AREA.--28.9 mi^2 (74.9 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
16...	1330	33	4.3	--	12	12	1.1
25...	1030	31	1.3	74	--	--	--
APR.							
18...	1600	32	4.0	64	7	9	.78
MAY							
16...	1020	35	6.3	50	4	8	.76
JUNE							
16...	1450	11	13.3	80	2	4	.12
JULY							
12...	1345	1.8	13.0	120	--	3	.01
JAN., 1973							
18...	1050	3.0	.0	96	3	2	.02

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
25...	8.2	2.4	4.2	1.0	44	36	3.7	.2	.31	.010	.07
JUNE											
16...	9.0	2.2	3.8	1.0	47	39	4.5	.0	.75	.010	.26

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
25...	.06	--	.090	30	0	--	--	--	--	--	--
JUNE											
16...	.05	.040	.060	32	0	8	0	0	0	.1	7

12434130 NINETEENMILE CREEK NEAR REPUBLIC, WASH.

LOCATION.--Lat 48°24'55", long 118°44'12", in NE¼SE¼ sec.26, T.34 N., R.32 E., Ferry County, Colville Indian Reservation, at State Highway 21 crossing, 3.0 miles (4.8 kilometers) south of West Fork and 16 miles (25.7 kilometers) south of Republic.

DRAINAGE AREA.--4.41 mi^2 (11.4 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
16...	1145	18	4.5	--	12	33	1.6
25...	1010	11	2.4	81	--	--	--
APR.							
18...	1015	8.9	3.8	72	3	8	.19
MAY							
16...	0940	1.1	7.2	103	3	2	.01
JUNE							
16...	0930	.67	9.4	113	1	1	.00
16...	1510	.67	--	115	--	--	--
JULY							
12...	1320	.01	9.7	101	2	3	.00
JAN., 1973							
18...	1020	.24	2.0	104	1	1	.00

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
25...	9.8	2.6	3.3	.8	51	42	2.7	1.1	.17	.010	.05
JUNE											
16...	15	3.3	3.6	.6	69	57	5.2	.1	.40	.010	.03

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
25...	.06	--	.090	35	0	--	--	--	--	--	--
JUNE											
16...	.07	.080	.090	51	0	10	0	0	2	.1	0

12434180 NORTH NANAMKIN CREEK NEAR KELLER, WASH.

LOCATION.--Lat 48°18'39", long 118°44'14", in SE¼SE¼ sec.35, T.33 N., R.32 E., Ferry County, Colville Indian Reservation, at State Highway 21 crossing, 0.3 mile (0.5 kilometer) upstream from mouth, and 16.2 miles (26.1 kilometers) north of Keller.

DRAINAGE AREA.--15.7 mi^2 (40.7 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
16...	1040	50	4.3	--	--	132	18
25...	0945	43	1.8	131	--	--	--
APR.							
18...	0925	28	3.0	142	4	24	1.8
MAY							
15...	1425	9.2	11.1	180	3	6	.15
JUNE							
16...	0850	6.7	11.7	216	2	4	.07
16...	1525	6.7	--	225	--	--	--
JULY							
12...	1240	1.9	14.0	278	2	2	.01
AUG.							
16...	1640	1.6	15.2	285	2	1	.00
SEP.							
13...	1515	.04	21.4	355	6	3	.00
OCT.							
17...	1200	.35	5.2	375	2	1	.00
NOV.							
15...	0945	.64	3.9	348	2	1	.00
DEC.							
13...	1200	.21	.0	445	2	2	.00
JAN., 1973							
18...	1520	1.7	.0	270	2	1	.00
FEB.							
14...	1245	.83	1.0	290	0	6	.01

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
25...	15	4.3	3.9	.8	56	46	19	.1	.22	.000	.05
JUNE											
16...	29	7.2	4.8	.9	94	77	36	.1	.59	.010	.04
SEP.											
13...	48	13	7.4	1.2	132	108	77	.9	.10	.000	.03
DEC.											
13...	63	17	8.4	1.5	148	121	120	1.2	.07	.000	.05

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
25...	.13	--	.070	55	9	--	--	--	--	--	--
JUNE											
16...	.04	.040	.050	100	25	24	0	0	2	.1	0
SEP.											
13...	.02	.020	.030	170	65	22	0	0	4	.5	0
DEC.											
13...	.17	.050	.050	230	110	<1	--	--	--	--	--

12434230 THIRTYMILE CREEK NEAR KELLER, WASH.

LOCATION.--Lat 48°15'40", long 118°40'53", in SW¼NE¼ sec.20, T.32 N., R.33 E., Ferry County, Colville Indian Reservation, 0.4 mile (0.6 kilometer) upstream from mouth and 12.7 miles (20.4 kilometers) north of Keller.

DRAINAGE AREA.--24.9 mi^2 (64.5 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
16...	0955	30	3.8	--	8	72	5.8
25...	0930	22	1.9	104	--	--	--
APR.							
20...	1020	18	4.6	103	4	25	1.2
MAY							
15...	1340	10	10.7	130	3	11	.30
JUNE							
16...	1540	7.7	13.1	140	3	7	.15
JULY							
12...	1205	5.5	11.0	156	1	4	.06
AUG.							
16...	1545	4.0	12.6	166	5	20	.22
SEP.							
13...	1530	3.2	10.5	174	3	2	.02
OCT.							
17...	1130	3.4	4.8	180	2	1	.01
NOV.							
15...	0920	3.0	5.7	180	1	1	.01
DEC.							
13...	1240	3.0	2.1	158	2	4	.03
JAN., 1973							
18...	1545	3.4	3.5	168	2	5	.05
FEB.							
14...	1305	2.9	3.5	180	0	7	.05

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
25...	11	3.3	5.4	1.2	58	48	5.1	.8	.91	.000	.05
JUNE											
16...	16	4.3	5.7	1.1	79	65	7.9	.3	.60	.010	.16
SEP.											
13...	18	5.8	6.9	1.0	87	71	14	1.0	.12	.000	.02
DEC.											
13...	20	6.4	7.2	1.1	93	76	16	1.2	.07	.000	.04

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
25...	.27	--	.060	41	0	--	--	--	--	--	--
JUNE											
16...	.10	.040	.060	58	0	23	0	0	2	.1	0
SEP.											
13...	.10	.030	.030	69	0	3	0	0	4	.5	0
DEC.											
13...	.17	.047	.048	76	0	4	--	--	--	--	--

12434320 BRIDGE CREEK AT MOUTH NEAR KELLER, WASH.

LOCATION.--Lat 48°13'25", long 118°41'19", in NW¼NW¼ sec.5, T.31 N., R.33 E., Ferry County, Colville Indian Reservation, 0.5 mile (0.8 kilometer) upstream from mouth, and 10.3 miles (16.6 kilometers) north of Keller.

DRAINAGE AREA.--31.6 mi^2 (81.8 km^2).

PERIOD OF RECORD: Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 to FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
15...	1715	29	4.3	--	17	82	6.4
25...	0905	36	2.0	105	--	--	--
APR.							
20...	0930	35	4.5	110	5	16	1.5
MAY							
15...	1250	49	9.3	74	19	74	9.8
JUNE							
17...	1100	16	11.4	120	3	10	.43
JULY							
12...	1120	6.6	12.5	160	2	6	.11
AUG.							
16...	1455	6.2	15.9	163	21	44	.74
SEP.							
13...	1440	2.1	13.5	200	2	3	.02
OCT.							
17...	1100	1.9	3.8	207	2	1	.01
NOV.							
17...	0845	2.7	4.8	200	1	1	.01
DEC.							
13...	1400	2.1	.0	202	6	13	.07
JAN., 1973							
20...	1040	3.9	1.0	180	4	7	.07
FEB.							
14...	1330	2.7	2.0	192	0	7	.05

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
25...	10	4.4	4.2	.9	55	45	6.4	1.3	.21	.010	.07
JUNE											
17...	13	5.3	3.9	.8	72	59	6.3	.2	.20	.010	.01
SEP.											
13...	22	11	5.7	1.0	122	100	11	.9	.03	.010	.03
DEC.											
13...	22	11	5.9	.9	119	97	13	1.0	.11	.000	.04

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
25...	.15	--	.040	43	0	--	--	--	--	--	--
JUNE											
17...	.04	.030	.050	54	0	26	0	0	2	.1	7
SEP.											
13...	.01	.020	.030	100	0	8	0	0	4	.6	0
DEC.											
13...	.17	.038	.039	100	3	3	--	--	--	--	--

12434380 CACHE CREEK NEAR KELLER, WASH.

LOCATION.--Lat 48°10'19", long 118°42'21", in NE¼SW¼ sec.19, T.31 N., R.33 E., Ferry County, Colville Indian Reservation, at State Highway 21 crossing, 6.6 miles (10.6 kilometers) north of Keller.

DRAINAGE AREA.--7.72 mi^2 (20.0 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
15...	1625	2.0	4.3	--	10	84	.45
24...	1015	3.0	1.8	172	--	--	--
APR.							
20...	0845	2.6	3.5	165	9	47	.33
MAY							
15...	1215	1.6	10.3	190	4	27	.12
JUNE							
16...	1536	1.5	12.0	200	3	25	.10
16...	1630	1.6	--	207	--	--	--
JULY							
12...	1050	.92	11.0	224	3	11	.03
AUG.							
16...	1415	.77	12.3	222	5	42	.09
SEP.							
13...	1715	.40	11.1	242	2	4	.00
OCT.							
17...	1445	.55	7.5	240	2	4	.01
NOV.							
14...	1330	.58	6.2	233	1	2	.00
DEC.							
13...	1440	.28	3.0	240	3	5	.00
JAN., 1973							
20...	1110	.66	2.0	225	2	12	.02
FEB.							
14...	1355	.59	4.0	228	1	10	.02

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
24...	17	8.1	7.2	2.4	105	86	4.7	1.2	.44	.000	.07
JUNE											
16...	22	9.2	7.6	2.7	130	107	5.3	.7	.26	.010	.02
SEP.											
13...	28	12	8.1	2.8	157	129	7.0	1.4	.06	.000	.03
DEC.											
13...	25	12	8.2	2.8	154	126	8.2	1.9	.05	.000	.04

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
24...	.15	--	.22	76	0	--	--	--	--	--	--
JUNE											
16...	.09	.16	.19	93	0	110	0	0	1	.1	10
SEP.											
13...	.10	.11	--	120	0	4	0	0	5	.9	0
DEC.											
13...	.14	.097	.10	110	0	<1	--	--	--	--	--

12434450 IRON CREEK NEAR KELLER, WASH.

LOCATION.--Lat 48°08'12", long 118°41'13", on north line of NW¼ sec.5, T.30 N., R.33 E., Ferry County, Colville Indian Reservation, at road crossing, 0.2 mile (0.3 kilometer) upstream from mouth and 4.0 miles (10.4 kilometers) north of Keller.

DRAINAGE AREA.--9.23 mi^2 (23.9 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
15...	1420	17	6.3	--	12	232	11
24...	1105	10	3.6	212	--	--	--
APR.							
19...	1330	8.7	7.6	213	7	32	.75
MAY							
12...	1120	3.0	10.2	260	2	2	.02
JUNE							
18...	1230	2.8	13.3	291	3	11	.08
JULY							
11...	1530	1.2	13.0	288	2	6	.02
AUG.							
16...	1245	.87	13.6	290	29	56	.13
SEP.							
12...	1430	.22	13.6	262	2	2	.00
OCT.							
12...	1355	.30	8.1	272	--	2	.00
NOV.							
14...	1030	.68	--	282	2	3	.01
DEC.							
13...	1515	.16	1.8	250	2	2	.00
JAN., 1973							
20...	1140	3.2	3.5	230	2	7	.06
FEB.							
14...	1415	1.6	4.5	237	0	6	.03

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
24...	25	9.2	5.5	.8	137	112	7.7	1.8	.22	.000	.06
JUNE											
18...	36	14	5.4	.9	184	151	9.5	.4	.17	.010	.01
SEP.											
12...	33	12	6.8	.8	181	148	9.0	.9	.08	.010	.02
DEC.											
13...	32	12	6.3	.7	159	130	9.0	1.9	.05	.000	.03

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
24...	.19	--	.12	100	0	--	--	--	--	--	--
JUNE											
18...	.16	.070	.080	150	0	16	0	0	4	.1	10
SEP.											
12...	.06	.070	.080	130	0	14	0	0	2	.2	0
DEC.											
13...	.15	.070	.071	130	0	1	--	--	--	--	--

12434500 SANPOIL RIVER NEAR KELLER, WASH.

LOCATION.--Lat 48°06'28", long 118°41'51", on south line of SE¼ sec.7, T.30 N., R.33 E., Ferry County, at gaging station 0.3 mi (0.5 km) upstream from Brush Creek, 2.2 mi (3.5 km) north of Keller, and at mile 14.1 (22.7 km).

DRAINAGE AREA.--880 mi^2 (2,279 km^2).

PERIOD OF RECORD.--Chemical analyses: July 1960 to September 1966 (partial-record station, at site 2.4 mi (3.9 km) downstream, published as 12435000), October 1971 to February 1973 (sampled at gage and at site 2.4 mi (3.9 km) downstream).
Water temperatures: July 1968 to September 1970.

REMARKS.--All samples taken this water year were obtained at the gaging station.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)
OCT.									
17...	1515	48	--	--	--	--	--	--	--
NOV.									
14...	1220	67	--	--	--	--	--	--	--
DEC.									
20...	1045	45	23	5.7	5.8	1.2	100	0	82
JAN.									
20...	0920	99	--	--	--	--	--	--	--
FEB.									
13...	1345	69	--	--	--	--	--	--	--

DATE	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
OCT.									
17...	--	--	--	--	--	--	--	--	--
NOV.									
14...	--	--	--	--	--	--	--	--	--
DEC.									
20...	16	1.6	.02	.02	.04	.03	.02	81	0
JAN.									
20...	--	--	--	--	--	--	--	--	--
FEB.									
13...	--	--	--	--	--	--	--	--	--

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	CARBON DIOXIDE (CO2) (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT.								
17...	202	--	8.2	2	--	--	1	.13
NOV.								
14...	220	--	5.4	1	--	--	5	.90
DEC.								
20...	185	7.7	.2	3	3.2	2	4	.49
JAN.								
20...	180	--	.0	2	--	--	6	1.6
FEB.								
13...	200	--	3.0	1	--	--	6	1.1

12434520 BRUSH CREEK NEAR KELLER, WASH.

LOCATION.--Lat 48°06'20", long 118°42'09", in NW¼NE¼ sec.18, T.30 N., R.33 E., Ferry County, Colville Indian Reservation, 2.0 miles (3.2 kilometers) north of Keller.

DRAINAGE AREA.--6.21 mi^2 (16.1 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
15...	1515	7.5	5.7	--	7	45	.91
24...	1045	6.1	3.0	112	--	--	--
APR.							
19...	1120	5.4	6.3	113	4	29	.42
MAY							
15...	1130	2.6	10.2	138	4	6	.04
JUNE							
16...	1205	2.4	12.5	144	1	5	.03
16...	1700	2.6	--	147	--	--	--
JULY							
11...	1615	1.1	13.0	160	2	3	.01
AUG.							
16...	1330	.47	15.6	188	2	1	.00
SEP.							
13...	1805	.24	12.2	202	2	2	.00
OCT.							
12...	1630	.31	7.2	221	--	3	.00
NOV.							
14...	1105	.32	5.5	222	1	2	.00
DEC.							
20...	1130	.40	2.2	210	2	2	.00
JAN., 1973							
20...	1205	.86	2.0	163	0	2	.00
FEB.							
13...	1300	.89	3.0	172	0	4	.01

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
24...	13	3.5	4.9	1.3	63	52	6.0	1.4	.25	.000	.05
JUNE											
16...	17	4.3	5.4	1.6	87	71	6.9	.4	.67	.010	.23
SEP.											
13...	28	6.0	6.0	1.5	120	98	10	.8	--	.000	.03
DEC.											
20...	28	6.4	6.1	1.7	124	102	12	1.5	.05	.000	.03

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
24...	.09	--	.070	47	0	--	--	--	--	--	--
JUNE											
16...	.13	.050	.060	60	0	31	0	2	1	.2	0
SEP.											
13...	.01	.020	.030	95	0	60	0	0	3	.5	10
DEC.											
20...	.14	.037	.053	96	0	11	--	--	--	--	--

12434600 JACK CREEK AT KELLER, WASH.

LOCATION.--Lat 48°04'54", long 118°41'18", in SW¼SW¼ sec.20, T.30 N., R.33 E., Ferry County, Colville Indian Reservation at State Highway 21 crossing, 0.2 mile (0.3 kilometer) upstream from mouth and 0.2 mile (0.3 kilometer) northwest of Keller.

DRAINAGE AREA.--8.17 mi^2 (21.2 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued)

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
15...	1330	9.0	5.1	--	21	209	5.1
24...	1125	6.2	1.9	112	--	--	--
APR.							
12...	1705	7.0	--	118	--	--	--
13...	0810	6.3	3.0	--	12	209	3.6
MAY							
12...	1210	2.8	11.9	142	3	18	.14
JUNE							
16...	1050	2.2	13.0	157	2	14	.08
16...	1720	1.8	--	159	--	--	--
JULY							
11...	1120	1.2	12.6	162	3	7	.02
AUG.							
16...	1005	1.1	12.9	170	3	26	.08
SEP.							
13...	1815	.57	11.4	170	3	6	.01
OCT.							
12...	1700	.57	6.1	178	2	4	.01
NOV.							
14...	0830	.49	3.5	180	1	3	.00
DEC.							
20...	1210	.49	.3	173	2	5	.01
JAN., 1973							
20...	1415	.59	1.0	175	4	52	.08
FEB.							
13...	1430	.62	1.5	175	0	4	.01

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
24...	12	3.6	5.2	1.5	64	52	6.8	1.2	.21	.000	.06
JUNE											
16...	19	5.0	5.8	1.6	90	74	8.9	.4	.90	.000	.16
SEP.											
13...	21	5.5	6.5	1.3	96	79	11	1.3	.01	.010	.00
DEC.											
20...	22	5.5	6.1	1.5	95	78	13	1.5	.08	.000	.04

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
24...	.10	--	.080	45	0	--	--	--	--	--	--
JUNE											
16...	.12	.050	.070	68	0	62	0	1	3	.1	0
SEP.											
13...	.07	.030	.040	75	0	48	0	0	3	.6	0
DEC.											
20...	.15	.030	.057	78	0	16	--	--	--	--	--

12434700 COPPER CREEK NEAR KELLER, WASH.

LOCATION.--Lat 48°04'16", long 118°39'55", in NE¼SW¼ sec.28, T.30 N., R.33 E., Ferry County, Colville Indian Reservation, at road crossing near mouth, 0.9 miles (1.4 kilometers) southeast of Keller.

DRAINAGE AREA.--9.02 mi^2 (23.4 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
14...	1640	1.7	5.0	--	26	58	.27
24...	1000	1.7	3.0	223	--	--	--
APR.							
12...	1700	1.9	--	220	--	--	--
13...	0845	1.4	4.3	--	5	4	.02
MAY							
12...	1040	1.0	9.5	240	8	24	.06
JUNE							
11...	1940	.84	12.5	171	14	27	.06
18...	1200	.88	--	251	--	--	--
JULY							
11...	1315	.75	13.4	240	7	20	.04
AUG.							
16...	1210	.68	13.4	236	30	74	.14
SEP.							
12...	1355	.41	10.8	235	5	22	.02
OCT.							
12...	1325	.42	6.6	250	--	14	.02
NOV.							
14...	1000	.41	4.7	248	3	8	.01
DEC.							
12...	1515	.07	.0	250	4	12	.00
JAN., 1973							
20...	1345	.50	1.0	240	3	10	.01
FEB.							
13...	1155	.45	1.0	260	1	8	.01

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972.											
24...	26	8.6	8.7	.8	132	108	9.4	.8	.25	.000	.05
JUNE											
18...	30	9.5	8.4	1.2	158	130	11	.9	.31	.010	.06
SEP.											
12...	29	9.3	9.2	1.1	153	125	8.5	.8	.22	.000	.05
DEC.											
12...	31	10	9.7	1.6	155	127	11	2.5	.11	.010	.07

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
24...	.19	--	.14	100	0	--	--	--	--	--	--
JUNE											
18...	.17	.11	.15	110	0	220	0	2	2	.1	7
SEP.											
12...	.13	.11	.14	110	0	150	0	0	3	.2	0
DEC.											
12...	.17	.11	.13	120	0	78	--	--	--	--	--

12434800 MEADOW CREEK NEAR KELLER, WASH.

LOCATION.--Lat 48°03'55", long 118°40'22", in SE¼SE¼ sec.29, T.30 N., R.33 E., Ferry County, Colville Indian Reservation, at State Highway 21 crossing, 0.9 mile (1.4 kilometers) south of Keller.

DRAINAGE AREA.--7.85 mi^2 (20.3 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
15...	1215	14.	5.0	--	30	1590	60
24...	1130	7.0	3.0	100	--	--	--
APR.							
12...	1710	6.1	--	113	--	--	--
13...	0740	6.5	4.5	--	6	46	.81
MAY							
12...	1300	2.2	13.1	121	9	25	.15
JUNE							
16...	0920	1.6	12.0	152	2	9	.04
16...	1730	1.6	--	150	--	--	--
JULY							
11...	1050	.83	13.2	154	3	5	.01
AUG.							
16...	0925	.47	14.1	176	3	2	.00
SEP.							
12...	1510	.28	12.2	180	4	1	.00
OCT.							
12...	1720	.21	6.9	195	--	--	--
NOV.							
14...	0820	.40	4.1	212	2	1	.00
DEC.							
20...	1250	.36	.4	215	5	16	.02
JAN., 1973							
20...	1500	.82	1.0	170	3	6	.01
FEB.							
13...	1445	.58	1.5	203	2	8	.01

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
24...	10	2.8	5.2	1.4	45	37	13	1.4	.18	.010	.11
JUNE											
16...	16	4.2	7.0	1.6	71	58	18	.7	.43	.010	.06
SEP.											
12...	19	5.3	8.5	1.8	87	71	23	.9	.12	.000	.05
DEC.											
20...	25	6.9	8.8	1.9	86	71	40	1.2	.12	.010	.03

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
24...	.13	--	.10	36	0	--	--	--	--	--	--
JUNE											
16...	.38	.060	.080	57	0	340	0	6	2	.2	10
SEP.											
12...	.32	.11	.11	69	0	100	0	2	4	.9	0
DEC.											
20...	.33	.041	.068	91	20	45	--	--	--	--	--

12434900 SILVER CREEK NEAR KELLER, WASH.

LOCATION.--Lat 48°03'01", long 118°39'19", on north line of NE¼ sec.4, T.29 N., R.33 E., Ferry County, Colville Indian Reservation, at road crossing, 2.3 miles (3.7 kilometers) southeast of Keller.

DRAINAGE AREA.--5.11 mi^2 (13.2 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
14...	1520	1.9	3.2	--	25	137	.70
24...	0955	2.2	3.6	193	--	--	--
APR.							
12...	1650	1.3	--	200	--	--	--
13...	0910	1.3	5.0	--	6	5	.02
MAY							
12...	1010	.65	9.0	218	2	10	.02
JUNE							
11...	1915	.48	10.0	187	2	3	.00
18...	1150	.38	--	234	--	--	--
JULY							
11...	1250	.44	11.5	232	2	6	.01
AUG.							
16...	1145	.33	11.8	249	4	9	.01
SEP.							
12...	1305	.26	10.8	252	2	1	.00
OCT.							
12...	1245	.27	7.6	260	--	2	.00
NOV.							
14...	0940	.22	6.3	260	2	4	.00
DEC.							
12...	1430	.12	1.8	260	2	5	.00
JAN., 1973							
20...	1320	.33	2.5	240	0	3	.00
FEB.							
13...	1140	.19	3.5	260	1	5	.00

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
24...	22	7.6	8.2	1.0	110	90	8.6	1.1	.44	.000	.04
JUNE											
18...	25	8.9	8.4	1.1	138	113	9.8	1.1	.22	.010	.03
SEP.											
12...	30	10	9.8	1.3	159	130	9.7	.9	.16	.000	.02
DEC.											
12...	33	11	10	1.7	167	137	11	2.3	.06	.010	.02

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
24...	.30	--	.13	86	0	--	--	--	--	--	--
JUNE											
18...	.18	.11	.12	98	0	61	0	0	4	.0	0
SEP.											
12...	.15	.12	.12	120	0	260	0	0	4	.4	0
DEC.											
12...	.28	.095	.099	130	0	4	--	--	--	--	--

12435020 JOHN TOM CREEK NEAR KELLER, WASH.

LOCATION.--Lat 48°01'47", long 118°39'24", in SW¼NE¼ sec.9, T.29 N., R.33 E., Ferry County, Colville Indian Reservation, at road crossing, 3.4 miles (5.5 kilometers) southeast of Keller.

DRAINAGE AREA.--7.47 mi^2 (19.3 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
14...	1450	6.6	3.6	--	24	1190	21
24...	0945	3.8	3.1	160	--	--	--
APR.							
13...	1355	2.0	10.6	185	17	70	.38
MAY							
12...	0935	.96	9.8	209	4	24	.06
JUNE							
11...	1850	.69	14.0	222	7	41	.08
18...	1140	1.0	--	235	--	--	--
JULY							
11...	1235	.26	17.0	248	2	7	.00
AUG.							
16...	1110	.41	15.0	230	31	105	.12
SEP.							
12...	1245	.14	13.6	290	2	1	.00
OCT.							
12...	1230	.17	7.6	315	--	2	.00
NOV.							
14...	0920	.21	5.3	312	2	2	.00
DEC.							
12...	1415	.20	.0	310	2	8	.00
JAN., 1973							
20...	1300	1.1	1.0	200	98	2120	6.3
FEB.							
13...	1125	.61	2.0	227	12	198	.33

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
24...	17	5.8	8.0	1.5	90	74	5.8	1.6	.72	.010	.18
JUNE											
18...	26	8.4	9.9	1.7	142	116	6.0	1.7	.30	.010	.04
SEP.											
12...	34	12	12	2.1	186	153	9.2	2.6	.16	.000	.04
DEC.											
12...	36	13	12	2.3	188	154	12	3.6	.19	.010	.05

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
24...	.46	--	.37	66	0	--	--	--	--	--	--
JUNE											
18...	.42	.18	.20	99	0	90	0	0	2	.0	20
SEP.											
12...	.63	.14	.015	130	0	66	0	0	2	.7	0
DEC.											
12...	.92	.087	.10	140	0	29	--	--	--	--	--

SANPOIL RIVER BASIN

12435050 DICK CREEK NEAR KELLER, WASH.

LOCATION.--Lat 48°00'33", long 118°40'12", in SW¼SW¼ sec.16, T.29 N., R.33 E., Ferry County, Colville Indian Reservation, at road crossing, 4.7 miles (7.6 kilometers) south of Keller.

DRAINAGE AREA.--6.81 mi^2 (17.6 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
14...	1415	5.8	3.4	--	120	1770	28
24...	0935	3.9	2.9	140	--	--	--
APR.							
13...	1320	1.5	9.4	152	16	142	.58
MAY							
12...	0900	.52	8.2	164	5	19	.03
JUNE							
11...	1830	.72	13.5	121	9	28	.05
18...	1125	.48	--	179	--	--	--
JULY							
11...	1210	.12	16.0	180	1	2	.00
AUG.							
16...	1100	.24	14.7	179	32	66	.04
JAN., 1973							
20...	1235	.62	1.0	157	26	190	.32
FEB.							
13...	1110	.48	2.0	168	7	62	.08

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
24...	15	5.0	7.2	1.1	77	63	5.9	1.6	.60	.000	.17
JUNE											
18...	20	6.1	9.1	1.2	106	87	6.1	.9	.29	.010	.03

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
24...	.34	--	.32	58	0	--	--	--	--	--	--
JUNE											
18...	.06	.15	.20	75	0	580	0	1	2	.1	0

12435100 MANILA CREEK NEAR KELLER, WASH.

LOCATION.--Lat 48°00'26", long 118°41'49", in SE¼SE¼ sec.18, T.29 N., R.33 E., Ferry County, Colville Indian Reservation, at mouth 4.8 miles (7.7 kilometers) south of Keller.

DRAINAGE AREA.--21.2 mi^2 (54.9 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
15...	1140	22	--	--	70	120	7.1
24...	1210	11	3.0	82	--	--	--
APR.							
19...	1415	5.1	10.0	98	7	14	.19
MAY							
16...	0815	2.6	9.5	112	4	10	.07
JUNE							
18...	1040	2.3	13.3	114	2	4	.02
JULY							
11...	1000	1.4	14.3	128	2	4	.02
AUG.							
16...	0820	1.1	14.5	142	11	14	.04
SEP.							
12...	1610	.63	14.2	150	2	1	.00
OCT.							
12...	1800	.64	7.3	160	--	--	--
NOV.							
14...	0720	.68	4.9	168	4	7	.01
DEC.							
20...	1345	.79	1.3	162	3	4	.01
JAN., 1973							
20...	1620	2.2	1.0	120	18	64	.38
FEB.							
13...	1600	1.9	2.0	160	130	313	1.6

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
24...	9.1	1.8	4.9	1.0	43	35	5.1	1.1	.14	.010	.06
JUNE											
18...	14	2.8	5.5	1.1	69	57	7.0	.7	.55	.010	.02
SEP.											
12...	17	3.9	7.4	1.3	91	75	7.8	.7	.07	.000	.04
DEC.											
20...	19	4.7	7.7	1.4	88	72	13	1.6	.04	.010	.04

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
24...	.18	--	.070	30	0	--	--	--	--	--	--
JUNE											
18...	.11	.040	.040	46	0	70	0	0	2	.2	0
SEP.											
12...	.05	.040	.040	58	0	12	0	0	4	1.4	0
DEC.											
20...	.31	.053	.070	67	0	50	--	--	--	--	--

12436542 PETER DAN CREEK AT ELMER CITY, WASH.

LOCATION.--Lat 48°00'42", long 118°56'55", in NW¼SW¼ sec.17, T.29 N., R.31 E., Okanogan County, Colville Indian Reservation, at road crossing 0.7 mile (1.1 kilometers) north of Elmer City.

DRAINAGE AREA.--15.5 mi^2 (40.1 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
17...	0730	6.2	5.3	--	22	42	.70
25...	0805	3.4	1.6	161	--	--	--
APR.							
17...	1315	1.3	8.1	182	3	18	.06
MAY							
15...	1630	.73	13.4	236	2	4	.01
JUNE							
15...	1720	.77	18.8	231	3	6	.01
JULY							
11...	0745	.32	13.8	272	1	2	.00
AUG.							
16...	0720	.02	13.6	365	1	1	.00
SEP.							
14...	0845	.01	11.8	352	2	1	.00
OCT.							
17...	1600	.09	9.7	355	2	1	.00
NOV.							
14...	1615	.23	7.8	332	2	2	.00
DEC.							
14...	1200	.08	1.0	380	2	4	.00
JAN., 1973							
21...	1245	.49	.5	260	4	120	.16
FEB.							
14...	1640	.56	2.0	270	22	34	.05

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
25...	16	4.3	12	2.5	91	75	5.2	3.2	.51	.010	.10
JUNE											
15...	23	6.0	17	3.4	150	123	6.3	1.6	.37	.020	.14
JULY											
11...	--	--	--	--	--	--	--	--	--	--	--
SEP.											
14...	38	11	24	4.8	203	167	23	3.8	.08	.010	.03
DEC.											
14...	41	12	25	5.6	227	186	19	4.4	.17	.000	.05

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
25...	.12	--	.11	58	0	--	--	--	--	--	--
JUNE											
15...	.02	.14	.16	82	0	--	0	0	2	.0	0
JULY											
11...	--	--	--	--	--	89	--	--	--	--	--
SEP.											
14...	.03	.070	.070	140	0	24	0	0	4	.6	10
DEC.											
14...	.17	.13	.14	150	0	25	--	--	--	--	--

12436895 MILL CREEK NEAR NESPELEM, WASH.

LOCATION.--Lat 48°13'28", long 119°00'04", in SW¼SE¼ sec.35, T.32 N., R.30 E., Okanogan County, Colville Indian Reservation, 4.2 miles (6.8 kilometers) north of Nespelem.

DRAINAGE AREA.--27.0 mi^2 (69.9 km^2).

PERIOD OF RECORD.--Chemical analyses: May 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MAY 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAY , 1972							
17...	1015	21	9.0	72	4	10	.57
JUNE							
13...	1645	13	12.2	93	3	2	.07
JULY							
13...	1500	3.7	16.1	117	2	4	.04
AUG.							
17...	1215	4.1	14.2	121	3	4	.04
SEP.							
14...	1410	1.4	10.8	147	2	4	.02
OCT.							
19...	1200	2.1	3.6	148	2	1	.01
NOV.							
17...	0950	3.2	3.5	148	1	2	.02
DEC.							
20...	1525	3.0	.2	124	5	1	.01
JAN., 1973							
21...	0900	3.8	.0	130	1	6	.06
FEB.							
16...	0845	3.6	1.5	128	2	1	.01

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
JUNE, 1972											
13...	10	2.3	4.3	1.1	55	45	4.1	.7	.43	.020	.23
SEP.											
14...	17	4.8	6.3	1.5	89	73	5.8	.1	.13	.010	.05
DEC.											
20...	14	4.0	5.2	1.9	70	57	6.0	1.3	.41	.010	.10

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
JUNE, 1972											
13...	.02	.020	.030	34	0	38	0	0	2	.2	10
SEP.											
14...	.00	.020	.020	62	0	22	0	0	2	.4	0
DEC.											
20...	.17	.025	.053	51	0	29	--	--	--	--	--

12436900 MILL CREEK NEAR MOUTH NEAR NESPELEM, WASH.

LOCATION.--Lat 48°12'34", long 118°59'05", on west line of SW¼SE¼ sec.1, T.31 N., R.30 E., Okanogan County, Colville Indian Reservation, at road crossing, 3.0 miles (4.8 kilometers) north of Nespelem.

DRAINAGE AREA.--29.0 mi^2 (75.1 km^2).

PERIOD OF RECORD.--Chemical analyses: March to February 1973 (discontinued).

CHEMICAL ANALYSES, MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
17...	1315	13	5.5	--	10	26	.91
23...	1745	11	7.1	65	--	--	--
APR.							
17...	1515	11	4.5	75	3	6	.18
MAY							
17...	1120	3.1	11.2	75	3	4	.03
JUNE							
13...	1715	.78	15.0	94	--	--	--
JULY							
13...	1545	.45	21.4	--	--	--	--
AUG.							
17...	1225	.11	16.3	--	--	--	--
OCT.							
19...	1230	.16	6.3	--	--	--	--
NOV.							
17...	1045	.73	3.9	--	--	--	--
DEC.							
20...	1545	.30	.1	--	--	--	--
JAN., 1973							
21...	0930	.20	.0	--	--	--	--
FEB.							
16...	0910	.10	.0	--	--	--	--

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
MAR., 1972								
23...	6.4	1.4	4.1	1.4	37	30	4.1	1.3

DATE	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	DISSOLVED NITRATE (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
MAR., 1972							
23...	.27	.000	.07	.09	.020	22	0

12437000 NESPELEM CANAL NEAR NESPELEM, WASH.

LOCATION.--Lat 48°10'47", long 118°58'44", in SE¼SE¼ sec.13, T.31 N., R.30 E., Okanogan County, Colville Indian Reservation, 250 ft (76 meters) downstream from diversion structure, 1.0 mile (1.6 kilometers) north of Nespelem.

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
17...	1355	3.9	7.2	--	15	23	.24
23...	1800	3.3	8.6	101	--	--	--
APR.							
17...	1550	1.5	7.5	105	2	6	.02
MAY							
17...	1255	7.0	11.4	92	3	10	.19
JUNE							
13...	1745	3.4	--	109	--	--	--
15...	0815	3.2	12.4	116	2	2	.02
JULY							
13...	1615	3.2	18.8	151	1	4	.03
AUG.							
17...	1315	4.1	13.2	179	1	1	.01
SEP.							
14...	1330	4.4	11.6	196	2	2	.02
OCT.							
19...	1115	1.5	6.0	207	2	1	.00
NOV.							
15...	1630	1.4	7.3	195	1	2	.01
DEC.							
21...	0845	.99	2.4	172	3	6	.02
JAN., 1973							
21...	1015	1.8	1.5	180	1	6	.03
FEB.							
15...	1530	1.9	5.0	182	2	0	.00

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
23...	10	3.3	4.5	1.1	44	36	15	1.2	.69	.000	.08
JUNE											
13...	12	4.0	3.9	.7	60	49	7.9	.9	.61	.010	.14
SEP.											
14...	22	8.1	6.6	1.3	110	90	14	.1	.06	.010	.03
DEC.											
21...	17	6.3	5.1	3.7	86	71	11	1.9	.58	.010	.11

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
23...	.09	--	.020	39	2	--	--	--	--	--	--
JUNE											
13...	.06	.020	.030	46	0	12	0	0	0	.1	10
SEP.											
14...	.11	.000	.010	88	0	17	0	0	2	.4	0
DEC.											
21...	.31	.065	.10	68	0	170	--	--	--	--	--

12437500 NESPELEM RIVER AT NESPELEM, WASH.

LOCATION.--Lat 48°10'35", long 118°58'52", in NE¼NE¼ sec.24, T.31 N., R.30 E., Okanogan County, Colville Indian Reservation, 0.3 mile (0.5 kilometer) downstream from canal intake, 0.5 mile (0.8 kilometer) upstream from millpond and 0.7 mile (1.1 kilometers) northwest of Nespelem.

DRAINAGE AREA.--122 mi^2 (316 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
17...	0905	109	7.5	--	10	36	11
23...	1730	160	8.8	103	--	--	--
APR.							
17...	1620	140	7.1	102	3	10	3.8
MAY							
17...	1355	145	11.5	88	3	12	4.7
JUNE							
13...	1755	79	--	108	--	--	--
15...	0835	71	12.3	112	2	7	1.3
JULY							
14...	1000	22	13.8	161	2	4	.24
AUG.							
17...	1130	12	12.8	190	2	2	.06
SEP.							
14...	1200	5.5	11.6	212	2	4	.06
OCT.							
18...	1035	8.9	6.5	215	2	1	.02
NOV.							
14...	1540	11	7.2	203	1	4	.12
DEC.							
21...	0920	31	2.8	175	5	16	1.3
JAN., 1973							
21...	1050	16	2.0	185	1	4	.17
FEB.							
16...	1000	14	5.0	190	2	1	.04

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
23...	10	3.4	4.5	1.4	42	34	15	.8	.30	.000	.08
JUNE											
13...	12	4.0	3.7	.7	60	49	8.4	.9	.51	.010	.13
SEP.											
14...	22	8.6	7.2	1.4	117	96	16	.2	.04	.010	.02
DEC.											
21...	18	6.5	5.2	3.2	89	73	12	1.6	.39	.010	.09

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
23...	.10	--	.020	39	5	--	--	--	--	--	--
JUNE											
13...	.26	.010	.040	46	0	20	0	0	0	.1	10
SEP.											
14...	.15	.010	.020	90	0	27	0	0	2	.4	0
DEC.											
21...	.31	.059	.12	72	0	93	--	--	--	--	--

12437505 NESPELEM RIVER BELOW MILLPOND AT NESPELEM, WASH.

LOCATION.--Lat 48°09'55", long 118°58'46", on south line of SE¼SE¼ sec.24, T.31 N., R.30 E., Okanogan County, Colville Indian Reservation, at street bridge at south edge of Nespelem, 0.2 mile (0.3 kilometer) downstream from millpond.

DRAINAGE AREA.--About 124 mi^2 (321 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
09...	0845	26	.6	--	--	--	--
17...	1420	128	7.0	--	16	78	27
23...	1805	166	8.6	104	--	--	--
APR.							
07...	1000	231	6.5	--	11	78	49
20...	1640	125	9.6	106	3	19	6.4
MAY							
17...	1445	138	11.9	90	4	21	7.8
19...	0925	206	9.5	--	4	102	57
JUNE							
13...	1810	81	--	109	--	--	--
15...	1915	72	16.0	113	2	8	1.6
JULY							
14...	1100	23	15.2	162	2	3	.19
27...	0735	12	12.3	188	2	2	.06
SEP.							
14...	1430	5.3	11.4	224	2	2	.03
19...	1545	4.8	11.9	--	--	--	--
OCT.							
18...	0900	10	5.6	219	2	1	.03
NOV.							
14...	1455	10	6.5	210	1	2	.05
DEC.							
14...	0915	10	1.0	211	2	0	.00
JAN., 1973							
19...	1145	23	2.5	170	2	8	.50
FEB.							
14...	1535	14	3.0	190	0	10	.38

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
23...	10	3.3	4.3	1.2	42	34	15	1.1	.28	.000	.06
JUNE											
13...	12	4.0	3.6	.7	61	50	8.6	.8	.28	.010	.08
SEP.											
14...	25	9.0	7.4	1.5	120	98	17	.1	.04	.010	.02
DEC.											
14...	24	9.0	7.3	1.6	116	95	16	1.5	.08	.010	.04

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
23...	.09	--	.020	39	4	--	--	--	--	--	--
JUNE											
13...	.06	.010	.030	46	0	26	0	0	2	.1	10
SEP.											
14...	.08	.010	.010	99	1	7	0	0	3	.4	0
DEC.											
14...	.41	.035	.036	97	2	14	--	--	--	--	--

12437590 LITTLE NESPELEM RIVER NEAR NESPELEM, WASH.

LOCATION.--Lat 48°07'23", long 118°58'39", in SE¼SE¼ sec.1, T.30 N., R.30 E., Okanogan County, Colville Indian Reservation, at State Highway 155 crossing, 2.9 miles (4.7 kilometers) south of Nespelem.

DRAINAGE AREA.--90.4 mi^2 (234 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
17...	0800	23	5.0	--	36	282	18
23...	1900	20	8.4	345	--	--	--
APR.							
17...	1400	17	8.0	353	10	108	5.0
MAY							
17...	1600	11	14.1	358	16	80	2.4
JUNE							
13...	1840	11	--	356	--	--	--
15...	1355	9.4	19.5	347	4	134	3.4
JULY							
14...	0900	3.6	14.4	420	2	9	.09
AUG.							
17...	0725	4.2	14.4	390	8	36	.41
SEP.							
14...	0920	2.3	10.5	415	2	4	.02
OCT.							
19...	0930	1.8	3.6	450	2	1	.00
NOV.							
17...	0900	4.0	4.1	490	2	6	.06
DEC.							
14...	1140	2.6	.2	470	2	8	.06
JAN., 1973							
21...	1140	8.6	.0	350	12	110	2.6
FEB.							
16...	1225	5.7	3.5	420	28	111	1.7

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
23...	37	12	18	3.3	185	152	36	1.8	.54	.000	.12
JUNE											
13...	42	14	16	2.6	201	165	26	1.1	.93	.010	.19
15...	--	--	--	--	--	--	--	--	--	--	--
SEP.											
14...	49	17	19	3.3	235	193	38	1.9	.09	.000	.02
DEC.											
14...	55	21	22	3.8	253	208	57	2.0	.18	.000	.07

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
23...	.9	--	.19	140	0	--	--	--	--	--	--
JUNE											
13...	.6	.11	.17	160	0	--	0	0	2	.4	10
15...	--	--	--	--	--	150	--	--	--	--	--
SEP.											
14...	.1	.080	.090	190	0	12	0	0	4	.5	20
DEC.											
14...	.3	.069	.070	220	16	14	--	--	--	--	--

12437600 NESPELEM RIVER AT MOUTH NEAR NESPELEM, WASH.

LOCATION.--Lat 48°07'38", long 119°01'32", in NW¼SE¼ sec.3, T.30 N., R.30 E., Okanogan County, Colville Indian Reservation, at road crossing, 0.6 mile (1.0 kilometer) downstream from Little Nespelem River, and 3.7 miles (6.0 kilometers) southwest of Nespelem.

DRAINAGE AREA.--224 mi^2 (580 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
17...	1615	150	9.9	--	15	210	85
23...	1820	185	8.7	137	--	--	--
APR.							
21...	0945	141	8.0	152	7	42	16
MAY							
17...	1530	158	13.3	120	14	48	20
JUNE							
13...	1825	100	--	153	--	--	--
15...	1455	88	18.8	159	2	13	3.1
JULY							
14...	1200	30	17.3	214	2	4	.32
AUG.							
17...	0805	19	14.9	260	5	17	.87
SEP.							
14...	1000	12	11.4	290	2	4	.13
OCT.							
19...	1000	15	4.6	273	--	2	.08
NOV.							
16...	1700	18	7.0	310	1	3	.15
DEC.							
14...	1100	15	.0	280	2	8	.32
JAN., 1973							
19...	1615	44	2.0	230	20	118	14
FEB.							
16...	1100	25	4.0	270	7	40	2.7

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
23...	14	4.4	6.0	1.4	58	48	18	1.3	.38	.000	.10
JUNE											
13...	17	5.6	5.6	1.1	85	70	11	.9	.56	.020	.26
SEP.											
14...	34	11	12	2.2	162	133	23	1.6	.09	.010	.02
DEC.											
14...	32	12	11	2.2	152	125	25	1.4	.26	.010	.10

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
23...	.12	--	.050	53	6	--	--	--	--	--	--
JUNE											
13...	.15	.020	.050	65	0	30	0	0	2	.2	10
SEP.											
14...	.02	.020	.030	130	0	160	0	0	3	.9	20
DEC.											
14...	.39	.056	.069	130	5	26	--	--	--	--	--

12437690 COYOTE CREEK NEAR NESPELEM, WASH.

LOCATION.--Lat 48°08'48", long 119°06'34", near center of NE¼ sec.36, T.31 N., R.29 E., Okanogan County, Colville Indian Reservation, at road crossing, 6.5 miles (10.5 kilometers) west of Nespelem.

DRAINAGE AREA.--28.7 mi^2 (74.3 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
17...	1705	4.1	11.5	--	10	30	.33
23...	1835	4.1	6.4	148	--	--	--
APR.							
21...	1020	4.2	8.7	135	8	28	.32
MAY							
18...	0900	6.7	9.9	124	17	79	1.4
JUNE							
15...	1555	3.7	18.8	136	5	150	1.5
JULY							
14...	1300	1.8	20.3	145	4	24	.12
AUG.							
17...	0900	.94	15.0	145	4	10	.03
SEP.							
14...	1110	.34	11.4	152	--	6	.01
OCT.							
19...	1030	.75	2.6	158	2	5	.01
NOV.							
16...	1620	1.3	6.3	168	1	6	.02
JAN., 1973							
19...	1530	1.6	.0	150	4	9	.04
FEB.							
16...	1130	1.1	1.5	149	67	238	.71

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
23...	16	3.6	9.5	2.3	86	71	5.1	1.9	.54	.000	.06
JUNE											
15...	17	3.1	6.9	1.7	78	64	5.6	.9	.43	.010	.07
JULY											
14...	--	--	--	--	--	--	--	--	--	--	--
SEP.											
14...	19	3.7	8.1	1.9	92	75	4.6	2.3	.14	.000	.02

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
23...	.05	--	.12	55	0	--	--	--	--	--	--
JUNE											
15...	.01	.060	.080	55	0	--	0	0	4	.2	10
JULY											
14...	--	--	--	--	--	850	--	--	--	--	--
SEP.											
14...	.01	.050	.050	63	0	150	0	0	5	.9	0

12445700 WANNACOTT CREEK NEAR OMAK, WASH.

LOCATION.--Lat 48°25'52", long 119°27'42", on west line of NW¼SE¼ sec.20, T.34 N., R.27 E., Okanogan County, Colville Indian Reservation, at road crossing, 0.3 mile (0.5 kilometer) upstream from mouth, and 3.4 miles (5.5 kilometers) northeast of Omak.

DRAINAGE AREA.--19.4 mi^2 (50.2 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
18...	0820	5.2	5.6	--	21	178	2.5
25...	1650	3.1	5.2	200	--	--	--
APR.							
10...	1220	3.4	9.7	--	5	21	.19
21...	1315	2.2	--	194	--	--	--
MAY							
18...	1215	6.2	11.3	144	13	124	2.1
JUNE							
13...	0730	3.2	--	200	--	--	--
15...	1030	2.5	17.0	159	5	26	.18
DEC.							
19...	1030	2.0	.0	225	--	2	.01
JAN., 1973							
17...	1100	1.1	.0	220	2	7	.02

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
25...	21	5.1	15	2.2	111	91	9.2	2.6	.42	.000	.07
JUNE											
13...	22	5.3	13	2.6	119	98	7.5	1.3	.71	.010	.12
15...	--	--	--	--	--	--	--	--	--	--	--
DEC.											
19...	25	6.2	14	3.5	131	107	14	2.0	.25	.000	.04

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
25...	.09	--	.070	73	0	--	--	--	--	--	--
JUNE											
13...	.03	.040	.10	77	0	200	0	2	2	.1	10
15...	--	--	--	--	--	80	--	--	--	--	--
DEC.											
19...	.23	.12	.14	88	0	25	--	--	--	--	--

12445900 OMAK CREEK NEAR OMAK, WASH.

LOCATION.--Lat 48°22'02", long 119°26'38", in NE¼NW¼ sec.16, T.33 N., R.27 E., Okanogan County, Colville Indian Reservation, at road crossing, 0.6 mile (1.0 kilometer) south of St. Mary's Mission, and 4.7 miles (7.6 kilometers) southeast of Omak.

DRAINAGE AREA.--119 mi^2 (308 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
09...	1535	6.5	1.0	--	--	--	--
18...	0845	51	4.4	--	59	397	55
25...	1520	33	5.0	--	--	--	--
APR.							
07...	0820	62	3.7	--	37	448	75
10...	1325	43	6.0	--	23	137	16
21...	1400	34	--	93	--	--	--
MAY							
18...	1340	89	9.5	68	52	508	122
23...	1215	83	10.6	--	--	--	--
31...	1450	44	19.0	--	--	--	--
JUNE							
13...	0745	--	--	172	--	--	--
13...	0905	36	--	--	--	--	--
15...	1644	32	19.0	75	12	58	5.0
JULY							
13...	1045	11	16.2	113	2	8	.24
27...	0850	4.5	15.0	134	1	3	.04
AUG.							
17...	1715	11	16.5	120	4	13	.39
SEP.							
20...	1110	3.7	8.0	136	2	1	.01
OCT.							
18...	1420	4.6	4.7	180	2	2	.02
NOV.							
16...	1055	6.3	4.5	149	2	6	.10
DEC.							
19...	1340	14	.0	128	4	26	.98
JAN., 1973							
17...	1605	8.6	.0	145	40	142	3.3
FEB.							
15...	1135	5.6	1.0	180	2	1	.02

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
25...	11	3.2	8.6	1.6	68	56	5.1	.9	.49	.010	.13
JUNE											
13...	16	5.8	11	1.8	81	66	11	6.8	.62	.010	.08
13...	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--
SEP.											
20...	18	4.9	12	1.9	109	89	5.0	.9	.09	.000	.05
DEC.											
19...	10	3.3	10	6.4	74	60	5.4	3.1	1.0	.010	.23

12445900 OMAK CREEK NEAR OMAK, WASH.--Continued

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	DIS-SOLVED NITRATE (N) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	FECAL COLI-FORM (COL. PER 100 ML)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
MAR., 1972											
25...	.09	--	.10	41	0	--	--	--	--	--	--
JUNE											
13...	.09	.020	.070	64	0	--	0	2	2	.2	0
13...	--	--	--	--	--	260	--	--	--	--	--
15...	--	--	--	--	--	100	--	--	--	--	--
SEP.											
20...	.01	.040	--	65	0	115	0	0	2	.7	10
DEC.											
19...	.32	.58	.64	39	0	420	--	--	--	--	--

12445930 KARTAR CREEK NEAR OMAK, WASH.

LOCATION.--Lat 48°14'52", long 119°19'45", in SW¼NE¼ sec.29, T.32 N., R.28 E., Okanogan County, Colville Indian Reservation, 0.2 mile (0.3 kilometer) upstream from Omak Lake and 14.6 miles (23.5 kilometers) southeast of Omak.

DRAINAGE AREA.--48.8 mi^2 (126 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
17...	1815	3.3	10.5	--	84	646	5.8
25...	1740	2.7	6.2	171	--	--	--
APR.							
10...	1845	2.8	8.3	220	19	90	.68
21...	1210	2.2	--	200	--	--	--
MAY							
18...	1100	2.6	11.9	210	38	186	1.3
25...	1415	2.5	19.0	225	--	--	--
JUNE							
13...	0815	2.2	--	260	--	--	--
15...	1355	1.3	24.0	262	--	14	.05
JULY							
13...	0900	.07	16.0	332	1	2	.00
14...	1645	--	14.5	360	--	--	--
AUG.							
17...	1630	.79	13.6	132	66	1720	3.7
SEP.							
06...	1245	.15	--	330	--	--	--
20...	0900	.09	12.1	356	1	1	.00
OCT.							
18...	1830	.09	10.3	360	1	2	.00
NOV.							
16...	1500	.06	10.5	360	1	2	.00
DEC.							
19...	0820	.42	3.2	230	2	6	.01
JAN., 1973							
17...	0830	1.5	2.0	210	17	102	.41
FEB.							
20...	1330	.23	6.5	275	11	104	.06

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
25...	17	5.2	13	2.3	98	80	5.9	2.6	.68	.000	.20
MAY											
25...	--	--	--	--	--	--	--	--	--	--	--
JUNE											
13...	29	8.1	16	2.8	164	135	6.7	2.6	.54	.010	.06
JULY											
14...	--	--	--	--	--	--	--	--	.21	.000	.01
SEP.											
20...	45	9.0	18	3.0	211	173	14	1.1	.37	.000	.04
OCT.											
18...	--	--	--	--	--	--	--	--	.15	.010	.02
NOV.											
16...	--	--	--	--	--	--	--	--	.12	.000	.01
DEC.											
19...	25	6.5	13	5.5	135	111	8.5	2.2	.58	.010	.11
JAN., 1973											
17...	--	--	--	--	--	--	--	--	1.5	.010	.31
FEB.											
20...	--	--	--	--	--	--	--	--	1.6	.010	.65

12445930 KARTAR CREEK NEAR OMAK, WASH.--Continued

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	DIS-SOLVED NITRATE (N) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	FECAL COLI-FORM (COL. PER 100 ML)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
MAR., 1972											
25...	.13	--	.19	64	0	--	--	--	--	--	--
MAY											
25...	--	--	--	--	--	120	--	--	--		--
JUNE											
13...	.35	.12	.16	110	0	300	0	1	2	.1	10
JULY											
14...	.10	.080	.11	--	--	850	--	--	--	--	--
SEP.											
20...	.32	.090	--	150	0	46	0	0	2	.4	10
OCT.											
18...	.34	.006	.069	--	--	25	--	--	--	--	--
NOV.											
16...	.32	.090	.091	--	--	15	--	--	--	--	--
DEC.											
19...	.64	.43	.49	89	0	3000	--	--	--	--	--
JAN., 1973											
17...	.62	.40	.47	--	--	520	--	--	--	--	--
FEB.											
20...	.62	.24	.41	--	--	--	--	--	--	--	--

12445945 NO NAME CREEK NEAR OMAK, WASH.

LOCATION.--Lat 48°19'40", long 119°26'02", in SE¼SE¼ sec.28, T.33 N., R.27 E., Okanogan County, Colville Indian Reservation, at road crossing, 0.4 mile (0.6 kilometer) upstream from mouth and 7.2 miles (11.6 kilometers) southeast of Omak.

DRAINAGE AREA.--3.98 mi^2 (10.3 km^2).

PERIOD OF RECORD.--Chemical analyses: April 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES APRIL 1972 TO FEBRUARY 1973

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
JUNE, 1972											
13...	35	8.6	17	2.9	165	135	21	2.3	.53	.020	.08
15...	--	--	--	--	--	--	--	--	--	--	--
SEP.											
20...	33	8.4	16	2.9	146	120	29	3.6	.22	.010	.06
OCT.											
18...	--	--	--	--	--	--	--	--	.30	.000	.07
NOV.											
16...	--	--	--	--	--	--	--	--	.44	.010	.08
DEC.											
19...	23	7.4	24	12	142	116	23	7.6	1.5	.020	.41
JAN., 1973											
17...	--	--	--	--	--	--	--	--	.56	.020	.24
FEB.											
20...	--	--	--	--	--	--	--	--	4.3	.010	2.4

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
JUNE, 1972											
13...	.45	.080	.12	120	0	600	0	0	2	.1	0
15...	--	--	--	--	--	680	--	--	--	--	--
SEP.											
20...	.25	.060	.070	120	0	330	0	0	2	.4	10
OCT.											
18...	.13	.074	.074	--	--	130	--	--	--	--	--
NOV.											
16...	.37	.13	.14	--	--	818	--	--	--	--	--
DEC.											
19...	.78	.83	.91	88	0	1000	--	--	--	--	--
JAN., 1973											
17...	.80	.23	.24	--	--	480	--	--	--	--	--
FEB.											
20...	.79	.12	.29	--	--	370	--	--	--	--	--

12445945 NO NAME CREEK NEAR OMAK, WASH.--Continued

CHEMICAL ANALYSES APRIL 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
APR., 1972							
10...	1600	1.2	10.3	--	7	18	.06
21...	1340	1.0	--	298	--	--	--
MAY							
18...	1450	1.1	13.6	346	6	24	.07
JUNE							
13...	0850	1.0	--	302	--	--	--
15...	1525	.89	18.5	288	2	8	.02
JULY							
13...	1000	.07	18.0	272	2	10	.00
AUG.							
17...	1810	.13	15.6	271	2	6	.00
SEP.							
20...	1035	.30	9.0	250	2	0	.00
OCT.							
18...	1750	.51	8.0	345	2	3	.00
NOV.							
16...	1400	.48	6.6	348	1	2	.00
DEC.							
19...	1620	2.8	.0	290	1	38	.29
JAN., 1973							
17...	1455	.73	2.5	300	2	4	.01
FEB.							
20...	1520	1.0	5.0	380	2	9	.02

12445948 NO NAME CREEK AT MOUTH NEAR OMAK, WASH.

LOCATION.--Lat 48°19'22", long 119°25'46", in NE¼NE¼ sec.33, T.33 N., R.27 E., Okanogan County, Colville Indian Reservation, at road crossing, 300 ft (91 meters) upstream from mouth, and 7.6 miles (12.2 kilometers) southeast of Omak.

DRAINAGE AREA.--7.11 mi^2 (18.4 km^2).

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
18...	0920	.58	6.8	--	2	4	.01
25...	1625	.54	7.0	--	--	--	--
APR.							
10...	1630	.51	--	350	--	--	--
MAY							
25...	1250	.42	14.0	310	--	--	--
JULY							
14...	1115	.15	--	420	--	--	--
AUG.							
17...	1750	.19	15.3	--	--	--	--
SEP.							
06...	1555	.01	16.6	570	--	--	--
OCT.							
18...	1530	--	7.7	--	--	--	--
18...	1730	.14	7.7	375	2	6	.00
NOV.							
16...	1345	.25	6.6	--	--	--	--
DEC.							
19...	1410	.57	.5	300	1	6	.01
JAN., 1973							
17...	1340	.14	2.0	360	2	2	.00
FEB.							
20...	1445	.26	.5	400	1	0	.00

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)
MAR., 1972									
25...	43	11	25	3.7	213	175	29	4.0	.29
MAY									
25...	--	--	--	--	--	--	--	--	--
JULY									
14...	--	--	--	--	--	--	--	--	--
SEP.									
06...	--	--	--	--	--	--	--	--	--
OCT.									
18...	--	--	--	--	--	--	--	--	.20
18...	--	--	--	--	--	--	--	--	--
NOV.									
16...	--	--	--	--	--	--	--	--	.34
DEC.									
19...	28	7.9	22	9.0	157	129	22	6.3	.97
JAN., 1973									
17...	--	--	--	--	--	--	--	--	.53
FEB.									
20...	--	--	--	--	--	--	--	--	3.3

12445948 NO NAME CREEK AT MOUTH NEAR OMAK, WASH.--Continued

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	DIS-SOLVED NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)	DIS-SOLVED NITRATE (N) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	FECAL COLI-FORM (COL. PER 100 ML)
MAR., 1972								
25...	.010	.04	.19	--	.050	150	0	--
MAY								
25...	--	--	--	--	--	--	--	B15
JULY								
14...	--	--	--	--	--	--	--	B650
SEP.								
06...	--	--	--	--	--	--	--	B5
OCT.								
18...	.000	.04	.07	.004	.037	--	--	--
18...	--	--	--	--	--	--	--	B8
NOV.								
16...	.010	.06	.25	.079	.083	--	--	<1
DEC.								
19...	.010	.26	.62	.36	.43	100	0	B300
JAN., 1973								
17...	.010	.27	.38	.081	.15	--	--	B780
FEB.								
20...	.010	2.2	.47	.050	.17	--	--	B160

12445990 OMAK CREEK AT OMAK, WASH.

LOCATION.--Lat 48°24'12", long 119°30'07", in NW¼SE¼ sec.36, T.34 N., R 26 E., Okanogan County, Colville Indian Reservation, at county road crossing at east edge of Omak, 0.2 mile (0.3 kilometer) upstream from mouth.

DRAINAGE AREA.--246 mi^2 (637 km^2), of which 104 mi^2 (269 km^2) is noncontributing.

PERIOD OF RECORD.--Chemical analyses: March 1972 to February 1973 (discontinued).

CHEMICAL ANALYSES MARCH 1972 TO FEBRUARY 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (MICROMHOS)	TURBIDITY (JTU)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
MAR., 1972							
18...	0740	46	11.5	--	62	574	71
25...	1700	47	7.7	209	--	--	--
APR.							
10...	1700	48	9.9	--	18	74	9.6
21...	1300	52	--	180	--	--	--
MAY							
18...	1300	91	11.5	114	41	265	65
JUNE							
13...	0745	39	--	172	--	--	--
15...	1145	34	16.0	170	8	59	5.4
JULY							
13...	0800	14	19.5	274	3	10	.38
AUG.							
17...	1545	11	21.9	320	5	34	1.0
SEP.							
20...	0950	5.2	24.9	520	3	7	.10
OCT.							
18...	1335	9.7	18.6	445	3	28	.73
NOV.							
16...	0920	11	13.4	430	3	20	.59
DEC.							
19...	1110	24	11.0	375	3	75	4.9
JAN., 1973							
17...	1125	18	6.5	310	12	40	1.9
FEB.							
15...	1005	13	10.0	430	0	4	.14

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)
MAR., 1972											
25...	20	8.0	12	2.2	102	84	19	5.2	.22	.010	.09
JUNE											
13...	16	5.8	11	1.8	81	66	11	6.8	.62	.010	.08
15...	--	--	--	--	--	--	--	--	--	--	--
SEP.											
20...	46	21	42	4.6	208	171	42	58	.31	.000	.07
DEC.											
19...	34	16	21	4.7	181	148	35	15	.50	.010	.05

DATE	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
MAR., 1972											
25...	.10	--	.11	83	0	--	--	--	--	--	--
JUNE											
13...	.09	.020	.070	0	0	800	0	2	1	.2	0
15...	--	--	--	--	--	750	--	--	--	--	--
SEP.											
20...	.03	.050	.12	200	31	260	0	9	3	.4	40
DEC.											
19...	.25	.10	.25	150	2	130	--	--	--	--	--

12447390 ANDREWS CREEK NEAR MAZAMA, WASH.
(Hydrologic bench-mark station)

LOCATION.--Lat 48°49'28", long 120°08'50", in NE¼ sec.1, T.38 N., R.21 E., Okanogan County, 50 ft (15 m) upstream from Blizzard Creek, 3.5 mi (5.6 km) upstream from mouth, and 20 mi (32.2 km) northeast of Mazama.

DRAINAGE AREA.--22.1 mi^2 (57.2 km^2).

PERIOD OF RECORD.--Chemical analyses: December 1971 TO SEPTEMBER 1973.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
NOV.											
09...	0955	11	6.7	.9	2.2	.6	31	0	25	3.9	.8
JAN.											
10...	1200	12	7.4	1.0	3.6	.5	40	0	33	1.3	.6
APR.											
25...	1005	10	6.7	1.0	2.1	.5	31	0	25	4.3	.6
JUNE											
21...	1010	8.2	3.6	.6	1.2	.4	18	0	14	1.6	.5
AUG.											
01...	1100	9.8	6.4	.9	2.3	.5	32	0	26	3.7	1.9

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)
NOV.										
09...	.0	.03	54	41	20	0	51	7.7	.9	5
JAN.										
10...	.1	--	57	46	23	0	62	7.4	.1	4
APR.										
25...	.0	.02	43	41	21	0	43	7.8	.9	3
JUNE										
21...	.0	.00	29	25	11	0	38	7.0	6.1	5
AUG.										
01...	.0	.02	42	41	20	0	63	7.6	9.5	3

DATE	DIS-SOLVED OXYGEN (MG/L)	BIO-CHEM-ICAL OXYGEN DEMAND (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
NOV.										
09...	12.9	--	1.0	>1	--	--	--	--	--	--
JAN.										
10...	--	.0	2.5	>1	--	--	--	--	--	--
APR.										
25...	12.2	--	.8	1	--	--	--	--	1	.03
JUNE										
21...	12.0	.1	2.9	3	0	0	1	0	2	.29
AUG.										
01...	9.8	.3	1.3	1	--	--	--	--	--	--

12447390 ANDREWS CREEK NEAR MAZAMA, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	TEMPERATURE (DEG C)	ALDRIN (UG/L)	ALDRIN IN BOTTOM DEPOSITS (UG/KG)	CHLORDANE (UG/L)	CHLORDANE IN BOTTOM DEPOSITS (UG/KG)	DDD (UG/L)	DDD IN BOTTOM DEPOSITS (UG/KG)	DDE (UG/L)	DDE IN BOTTOM DEPOSITS (UG/KG)	DDT (UG/L)
JUNE 21...	1010	6.0	.00	.0	.0	0	.00	.0	.00	.0	.00

DATE	DDT IN BOTTOM DEPOSITS (UG/KG)	DIAZINON (UG/L)	DIELDRIN (UG/L)	DIELDRIN IN BOTTOM DEPOSITS (UG/KG)	ENDRIN (UG/L)	ENDRIN IN BOTTOM DEPOSITS (UG/KG)	HEPTACHLOR (UG/L)	HEPTACHLOR IN BOTTOM DEPOSITS (UG/KG)	HEPTACHLOR EPOXIDE (UG/L)	HEPTACHLOR EPOXIDE IN BOTTOM DEPOSITS (UG/KG)
JUNE 21...	.0	.00	.00	.0	.00	.0	.00	.0	.00	.0

DATE	LINDANE (UG/L)	LINDANE IN BOTTOM DEPOSITS (UG/KG)	MALATHION (UG/L)	METHYL PARATHION (UG/L)	PARATHION (UG/L)	PCB (UG/L)	PCB IN BOTTOM DEPOSITS (UG/KG)	2,4-D (UG/L)	2,4,5-T (UG/L)	SILVEX (UG/L)
JUNE 21...	.00	.0	.00	.00	.00	.0	0	.00	.00	.00

DATE	TIME	DISSOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUSPENDED GROSS ALPHA AS U-NAT. (UG/L)	DISSOLVED GROSS BETA AS CS-137 (PC/L)	SUSPENDED GROSS BETA AS CS-137 (PC/L)	DISSOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUSPENDED GROSS BETA AS SR90 /Y90 (PC/L)	DISSOLVED RA-226 (RADON METHOD) (PC/L)	DISSOLVED URANIUM (U) (UG/L)
JAN. 10...	1200	<.5	1.8	1.1	1.4	.9	1.2	.04	.05

12455550 NASON CREEK NEAR PLAIN, WASH.

LOCATION.--Lat 47°48'27", long 120°42'48", in NW¼SW¼ sec.27, T.27 N., R.17 E., Chelan County, Wenatchee National Forest, temperature recorder, 0.2 mi (0.3 km) upstream from mouth and 4.0 mi (6.4 km) northwest of Plain.

DRAINAGE AREA.--108 mi^2 (280 km^2).

PERIOD OF RECORD.--Water temperatures: June 1973 to September 1973.

EXTREMES.--June to September 1973:
Water temperatures: Maximum, 22.0°C Aug. 13; minimum, 7.0°C July 1.

REMARKS.--Recorder not operating Sept. 13-18; range in temperature 9.0°C to 15.0°C.

TEMPERATURE (°C) OF WATER, JUNE 1973 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	---	---	---	---	13.5	7.0	21.5	15.5	14.5	9.0
2	---	---	---	---	---	---	15.0	9.5	21.0	15.5	15.5	10.5
3	---	---	---	---	---	---	16.0	10.0	21.5	15.5	16.5	12.0
4	---	---	---	---	---	---	16.5	11.5	21.5	16.0	18.0	12.0
5	---	---	---	---	---	---	15.5	11.0	19.5	15.5	18.5	13.0
6	---	---	---	---	---	---	15.0	9.5	19.5	14.0	17.0	14.5
7	---	---	---	---	---	---	14.0	9.5	20.0	14.0	16.5	13.0
8	---	---	---	---	---	---	16.0	10.0	21.0	15.0	15.0	10.5
9	---	---	---	---	---	---	16.5	11.0	21.0	15.5	18.0	12.0
10	---	---	---	---	---	---	17.0	11.5	21.0	16.0	18.5	14.0
11	---	---	---	---	---	---	16.5	11.0	20.5	15.0	18.5	14.0
12	---	---	---	---	---	---	18.0	11.0	21.0	15.5	18.0	14.0
13	---	---	---	---	---	---	19.0	12.0	22.0	16.5	---	---
14	---	---	---	---	---	---	20.0	14.0	21.0	16.0	---	---
15	---	---	---	---	---	---	20.0	14.0	19.5	14.5	---	---
16	---	---	---	---	---	---	20.0	14.5	18.0	14.0	---	---
17	---	---	---	---	---	---	20.5	14.5	16.5	12.0	---	---
18	---	---	---	---	---	---	20.5	14.5	16.5	11.0	13.0	---
19	---	---	---	---	---	---	20.5	15.0	16.5	11.0	11.5	10.0
20	---	---	---	---	13.5	9.0	18.0	14.5	18.0	12.0	11.5	10.0
21	---	---	---	---	13.0	9.5	18.5	13.0	17.0	11.5	12.0	10.0
22	---	---	---	---	12.0	9.5	17.0	11.5	17.0	11.5	11.0	9.5
23	---	---	---	---	11.5	8.5	16.5	11.0	16.0	11.5	12.0	9.5
24	---	---	---	---	10.5	8.0	17.0	11.0	15.5	11.5	11.5	9.0
25	---	---	---	---	11.0	8.5	19.5	13.0	16.0	11.0	11.5	9.0
26	---	---	---	---	12.0	9.0	20.5	14.5	15.5	13.0	13.0	9.5
27	---	---	---	---	15.0	10.0	21.5	15.5	16.5	11.5	13.0	9.5
28	---	---	---	---	15.0	11.0	21.5	15.5	18.0	12.0	13.0	10.0
29	---	---	---	---	14.0	9.5	20.5	15.5	18.0	13.0	13.5	10.0
30	---	---	---	---	13.0	9.0	21.0	15.5	15.5	12.0	13.0	10.0
31	---	---	---	---	---	---	21.5	15.5	15.0	10.0	---	---
MONTH	---	---	---	---	---	---	21.5	7.0	22.0	10.0	18.5	9.0

12464669 WEST MEDICAL LAKE NEAR MEDICAL LAKE, WASH.

LOCATION.--Lat 47°33'42", long 117°42'05", in SW¼NE¼ sec.24, T.24 N., R.40 E., Spokane County, 1.2 mi (1.9 km) southwest of town of Medical Lake.

DRAINAGE AREA.--1.84 mi^2 (4.77 km^2).

PERIOD OF RECORD.--Chemical analyses: April 1973 to October 1973 (discontinued).

REMARKS.--Descriptive location given above is for the southernmost point of lake. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, APRIL 1973 TO OCTOBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)
APR., 1973										
03...	1535	3.0	6.8	20	--	120	--	--	--	--
03...	1545	26	6.3	20	--	110	--	--	--	--
MAY										
23...	1155	3.0	17.0	18	90	120	--	--	--	--
23...	1205	26	10.9	21	120	260	--	--	--	--
JULY										
11...	0945	3.0	19.3	19	50	120	--	--	--	--
11...	0950	24	14.1	19	90	220	--	--	--	--
OCT.										
03...	0850	3.0	13.2	--	50	140	38	19	120	18
03...	0900	22	13.2	20	70	130	--	--	--	--

DATE	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)
APR., 1973										
03...	356	--	292	--	--	.25	.02	2.1	2.1	4.2
03...	363	--	298	--	--	.22	.02	2.2	1.6	3.8
MAY										
23...	326	19	299	--	--	.20	.04	.53	1.5	2.0
23...	352	--	289	--	--	.14	.02	2.2	.60	2.8
JULY										
11...	291	37	300	--	--	.01	.00	1.7	.80	2.5
11...	372	--	305	--	--	.02	.00	1.2	.80	2.0
OCT.										
03...	384	--	315	14	81	.01	.04	1.1	1.8	2.9
03...	385	--	316	--	--	.02	.04	1.2	1.6	2.8

DATE	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR (PLATINUM-COBALT UNITS)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
APR., 1973									
03...	2.6	2.4	--	--	--	705	10	4.6	17
03...	2.6	2.4	--	--	--	706	20	--	--
MAY									
23...	3.2	3.2	--	--	--	763	10	6.1	20
23...	8.0	4.1	--	--	--	768	10	--	--
JULY									
11...	3.0	2.9	--	--	--	749	15	9.2	19
11...	3.4	3.4	--	--	--	780	15	--	--
OCT.									
03...	3.0	2.9	5	170	0	778	5	1.9	21
03...	3.0	2.9	--	--	--	784	5	--	--

12464670 CLEAR LAKE NEAR MEDICAL LAKE, WASH.

LOCATION.--Lat 47°30'58", long 117°42'22", in SE¼NW¼ sec.1, T.23 N., R.40 E., Spokane County, 4.2 mi (6.8 km) south of town of Medical Lake.

DRAINAGE AREA.--7.67 mi^2 (19.87 km^2).

PERIOD OF RECORD.--Chemical analyses: April 1973 to October 1973 (discontinued).

REMARKS.--Descriptive location given above is for lake outlet. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, APRIL 1973 TO OCTOBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
APR., 1973											
05...	1400	3.0	7.3	.1	--	10	--	--	--	--	389
05...	1415	99	4.0	1.6	--	530	--	--	--	--	404
MAY											
21...	1605	3.0	17.2	.1	9	20	--	--	--	--	365
21...	1615	104	4.9	2.9	260	1000	--	--	--	--	392
JULY											
09...	1540	3.0	21.3	1.2	30	30	--	--	--	--	309
09...	1550	104	5.1	3.2	280	780	--	--	--	--	410
OCT.											
01...	1650	3.0	14.7	3.0	30	33	16	33	100	20	410
01...	1700	102	5.8	4.4	280	670	--	--	--	--	428

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
APR., 1973										
05...	--	319	--	--	.04	.00	.16	1.6	1.8	.05
05...	--	331	--	--	.01	.00	1.5	1.0	2.5	.18
MAY										
21...	16	326	--	--	.02	.00	.08	1.6	1.7	.07
21...	--	322	--	--	.01	.00	3.0	.30	3.3	.32
JULY										
09...	39	318	--	--	.02	.00	.09	.39	.48	.05
09...	--	336	--	--	.02	.00	3.2	3.0	6.2	.32
OCT.										
01...	--	336	5.4	47	.02	.00	.10	1.7	1.8	.04
01...	0	351	--	--	.02	.00	3.9	2.3	6.2	.56

DATE	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR (PLATINUM-COBALT UNITS)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
APR., 1973										
05...	.02	--	--	--	--	--	641	10	6.5	17
05...	.02	--	--	--	--	--	650	10	--	--
MAY										
21...	.00	--	--	--	--	--	680	5	9.2	20
21...	.16	--	--	--	--	--	667	10	--	--
JULY										
09...	.00	--	--	--	--	--	670	10	11	21
09...	.32	--	--	--	--	--	660	20	--	--
OCT.										
01...	.00	426	.58	3	180	0	640	10	12	20
01...	.45	--	--	--	--	--	660	10	--	--

12484000 WILSON CREEK AT THRALL, WASH.

LOCATION.--Lat 46°55'04", long 120°30'25", in NE¼SW¼ sec.31, T.17 N., R.19 E., Kittitas County, at U.S. Highway 97 bridge, 100 ft (30 m) upstream from mouth, and 1.0 mi (1.6 km) south of Thrall.

DRAINAGE AREA.--382 mi^2 (989 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1965 to September 1970, October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
OCT.								
11...	1620	276	.52	.02	.27	.31	.58	.60
24...	1605	--	.78	.03	.22	.29	.51	.30
NOV.								
15...	1030	160	.92	.02	.50	.25	.75	.33
29...	1550	--	.94	.01	.53	.23	.76	.26
DEC.								
13...	1030	90	1.1	.02	.80	.20	1.0	.30
26...	1105	--	.85	.02	.31	.40	.71	.23
JAN.								
09...	1135	--	1.1	.01	.52	.46	.98	.34
23...	1030	115	.31	.02	.53	.40	.93	.29
FEB.								
13...	1120	--	.87	.01	.53	.24	.77	.36
27...	1135	150	.77	.01	.48	.92	1.4	.24
MAR.								
06...	1115	155	.67	.01	.36	.74	1.1	.24
20...	1100	134	.74	.02	.32	.31	.63	.44
APR.								
10...	1330	110	.76	.02	.23	.37	.60	.32
24...	1300	90	1.1	.03	.54	.40	.94	.75
MAY								
08...	1115	333	.72	.03	.41	.99	1.4	.44
30...	1245	290	.69	.01	.13	.38	.51	.30
JUNE								
05...	1145	95	.62	.02	.13	.56	.69	.27
19...	1130	365	.66	.02	.24	.13	.37	.36
JULY								
10...	1130	240	.71	.02	.16	.05	.21	.36
24...	1120	402	.79	.03	.08	.45	.53	.23
AUG.								
14...	1110	300	.67	.02	.09	.42	.51	.24
28...	1230	320	.68	.01	.19	.38	.57	.21
SEP.								
11...	1030	270	.77	.02	.11	.37	.48	.24
25...	1115	290	.63	.02	.21	.37	.58	.20

12484000 WILSON CREEK AT THRALL, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)
OCT.								
11...	.13	250	8.0	11.0	16	1	10.5	3500
24...	.30	365	8.5	11.1	25	1	11.9	900
NOV.								
15...	.28	330	8.1	8.0	23	1	7.7	>8000
29...	.19	140	7.3	7.0	2	3	10.2	2000
DEC.								
13...	.20	350	7.9	.0	23	20	9.8	3500
26...	.18	350	7.6	5.2	42	10	--	>8000
JAN.								
09...	.19	425	7.7	1.1	22	7	11.8	4000
23...	.16	400	7.9	3.5	27	6	11.0	5000
FEB.								
13...	.19	420	8.1	5.4	22	6	13.4	1100
27...	.21	390	8.1	7.5	29	6	12.9	800
MAR.								
06...	.15	380	8.2	7.7	23	4	12.1	800
20...	.12	400	8.4	8.7	10	4	14.1	100
APR.								
10...	.20	390	8.6	16.5	29	5	14.5	800
24...	.28	275	7.8	14.2	52	15	9.7	3000
MAY								
08...	.44	300	7.8	10.4	69	30	11.1	7000
30...	.20	300	8.0	16.4	13	20	10.5	16000
JUNE								
05...	.23	350	8.1	15.7	58	11	11.4	8000
19...	.17	102	7.7	14.9	11	1	10.8	1500
JULY								
10...	.18	350	8.3	18.0	55	6	10.4	1100
24...	.22	350	8.1	15.9	52	5	10.3	45000
AUG.								
14...	.19	350	8.1	18.1	33	4	--	10000
28...	.16	350	8.1	15.9	40	5	10.5	11000
SEP.								
11...	.18	380	8.1	16.6	42	3	9.6	470
25...	.12	350	8.0	12.8	24	4	10.4	2000

12499000 NACHES RIVER AT YAKIMA, WASH.

LOCATION.--Lat 46°37'42", long 120°31'10", in NE¼SW¼ sec.12, T.13 N., R.18 E., Yakima County, at railroad crossing 0.3 mi (0.5 km) upstream from mouth and 1.0 mi (1.6 km) north of Yakima.

DRAINAGE AREA.--1,106 mi² (2,865 km²).

PERIOD OF RECORD.--Chemical analyses: July 1960 to September 1970, October 1972 to September 1973 (discontinued). Records prior to October 1972 published as 12498700, "near Yakima," were collected at this site.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)
OCT.											
11...	1520	700	.04	.00	.09	.01	.10	.01	.01	78	8.6
24...	1520	--	.56	.00	.02	.03	.05	.07	.01	94	9.0
NOV.											
15...	0915	560	.08	.00	.04	.09	.13	.02	.01	110	8.0
29...	1430	--	.09	.00	.05	.03	.08	.03	.02	62	7.3
DEC.											
13...	0930	1080	.14	.00	.05	.01	.06	.25	.01	96	7.6
26...	0950	--	.08	.00	.03	.13	.16	.02	.01	63	7.0
JAN.											
09...	1045	--	.11	.00	.04	.15	.19	.01	.00	90	7.3
23...	0945	1350	.08	.00	.07	.26	.33	.01	.01	87	7.7
FEB.											
13...	1035	--	.11	.00	.02	.04	.06	.04	.01	106	7.5
27...	1052	600	.12	.00	.07	.17	.24	.02	.00	120	7.9
MAR.											
06...	1025	580	.08	.00	.03	.18	.21	.02	.01	115	8.1
20...	1018	350	.02	.02	.06	.19	.25	.05	.05	120	8.7
APR.											
10...	1240	1290	.01	.00	.06	.11	.17	.03	.01	86	8.3
24...	1400	4400	.02	.00	.05	.10	.15	.03	.00	75	7.7
MAY											
08...	1025	1600	.03	.00	.03	.08	.11	.02	.01	86	7.9
30...	1150	1150	.06	.00	.03	.06	.09	.02	.01	73	7.8
JUNE											
05...	1100	1870	.08	.02	.03	.10	.13	.03	.00	85	7.9
19...	1015	520	.10	.01	.07	--	--	.03	.02	350	8.0
JULY											
10...	1035	1070	.05	.00	.10	.13	.23	.02	.01	94	8.1
24...	1015	820	.06	.00	.02	.11	.13	.02	.00	104	7.9
AUG.											
14...	1005	690	.04	.00	.03	.15	.18	.02	.01	104	8.1
28...	1040	560	.06	.00	.07	.14	.21	.03	.01	120	8.2
SEP.											
11...	0950	1010	.04	.00	.09	.10	.19	.02	.01	99	7.8
25...	1030	580	.29	.01	.14	.18	.32	.07	.01	140	7.8

12499000 NACHES RIVER AT YAKIMA, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
OCT.										
11...	11.0	16	2	11.8	270	0	4	4	.2	40
24...	11.5	11	0	12.1	170	0	5	1	.5	0
NOV.										
15...	7.1	11	0	9.5	400	0	1	0	.6	0
29...	4.4	3	3	12.2	130	--	--	--	--	--
DEC.										
13...	.0	10	5	14.5	200	0	1	0	.1	10
26...	4.1	23	6	--	4500	0	10	3	.0	50
JAN.										
09...	.0	18	5	13.7	2000	0	3	2	.1	20
23...	1.2	15	2	13.4	800	0	3	1	.2	30
FEB.										
13...	2.5	9	4	14.2	130	0	1	6	.0	20
27...	5.6	20	4	11.8	100	0	3	4	.1	20
MAR.										
06...	5.9	12	2	11.6	100	0	1	3	.0	30
20...	7.1	21	1	14.6	170	0	1	1	.0	0
APR.										
10...	11.7	19	4	12.4	320	0	18	3	.0	0
24...	14.5	16	3	11.8	240	0	2	4	.2	20
MAY										
08...	9.6	16	2	12.4	270	0	3	3	.0	10
30...	13.6	9	1	10.8	200	0	0	1	.1	30
JUNE										
05...	15.5	13	2	11.0	700	0	6	1	.2	20
19...	13.9	11	15	11.0	225	0	3	5	.1	10
JULY										
10...	17.1	12	2	10.4	225	0	3	0	.3	--
24...	16.5	12	2	10.4	<400	0	4	1	.0	0
AUG.										
14...	18.4	49	2	--	600	0	3	0	.0	0
28...	16.6	12	1	11.2	1300	--	--	--	.0	--
SEP.										
11...	16.4	17	4	10.1	2000	0	2	2	.0	40
25...	12.5	21	14	11.1	950	0	1	2	.0	50

12503950 YAKIMA RIVER AT PARKER, WASH.

LOCATION.--Lat 46°30'22", long 120°27'07", in NE¼NW¼ sec.28, T.12 N., R.19 E., Yakima County, at road bridge 0.7 mi (1.1 km) east of Parker, 0.8 mi (1.3 km) upstream from Sunnyside diversion dam, and at mile 104.6 (168.3 km).

DRAINAGE AREA.--3,660 mi² (9,480 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: August 1959 to September 1970, October 1972 to September 1973. Records prior to October 1972, collected at this site but published as 12505000, "near Parker".
Water temperatures: August 1959 to September 1970.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)
OCT.											
11...	1440	1660	.20	.01	.12	.15	.27	.05	.05	135	8.0
24...	1440	1980	.17	.01	.16	.04	.20	.09	.08	160	8.4
NOV.											
15...	0805	1500	.32	.01	.14	.15	.29	.10	.08	151	8.0
29...	1357	1860	.27	.01	.19	.04	.23	.09	.07	93	7.5
DEC.											
26...	0900	4600	.21	.01	.09	.05	.14	.06	.03	85	7.1
JAN.											
09...	1015	3240	.22	.00	.07	.09	.16	.05	.03	125	7.2
23...	0915	3700	.18	.01	.08	.11	.19	.05	.02	110	7.6
FEB.											
13...	1005	1720	.24	.00	.10	.13	.23	.07	.04	160	7.6
27...	1020	1640	.29	.01	.16	.19	.35	.11	.08	180	7.8
MAR.											
06...	0955	1700	.16	.02	.12	.17	.29	.08	.05	119	8.0
20...	0950	882	.16	.01	.19	.16	.35	.10	.10	190	8.0
APR.											
10...	1210	1120	.08	.01	.14	.06	.20	.11	.05	120	8.0
24...	1200	1910	.10	.00	.06	.12	.18	.07	.03	99	7.5
MAY											
08...	1000	1580	.15	.00	.08	.14	.22	.07	.05	116	7.5
30...	1120	1520	.17	.00	.06	.17	.23	.09	.05	113	7.7
JUNE											
05...	1025	1310	.12	.00	.07	.12	.19	.20	.04	120	8.0
19...	0930	1270	.15	.01	.11	.02	.13	.56	.05	130	8.0
JULY											
10...	1005	1210	.17	.00	.14	.36	.50	.12	.04	120	7.8
24...	0945	1210	.12	.01	.04	.19	.23	.08	.05	113	7.9
AUG.											
14...	0945	1130	.15	.00	.04	.19	.23	.07	.04	130	8.0
28...	1000	1120	.13	.00	.06	.19	.25	.06	.04	150	8.1
SEP.											
11...	0925	1060	.15	.00	.11	.18	.29	.08	.05	160	7.9
25...	1005	1150	.34	.01	.12	.16	.28	.12	.06	210	8.0

12503950 YAKIMA RIVER AT PARKER, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT.										
11...	11.1	14	3	12.5	2200	0	4	5	.2	30
24...	11.0	18	1	11.5	1200	10	4	1	.1	20
NOV.										
15...	6.9	16	1	9.6	3300	0	3	1	.1	10
29...	4.2	3	4	10.2	300	0	1	0	1.3	10
DEC.										
26...	4.1	25	7	--	5000	0	2	2	.0	80
JAN.										
09...	.0	14	2	14.1	500	0	1	0	.3	10
23...	2.3	14	5	13.4	600	0	1	1	.1	10
FEB.										
13...	3.6	12	4	12.8	16000	0	2	5	.0	0
27...	6.8	24	7	12.6	500	0	3	5	.2	20
MAR.										
06...	6.4	16	3	10.5	1800	0	1	4	.2	30
20...	7.2	11	2	12.6	1800	0	2	2	.0	10
APR.										
10...	12.3	21	5	12.0	1700	0	6	3	.0	20
24...	12.2	17	4	12.2	500	0	2	3	.1	0
MAY										
08...	10.4	21	4	11.8	1500	0	9	3	.0	10
30...	15.8	8	4	10.8	2300	0	2	0	.4	60
JUNE										
05...	16.5	18	3	10.8	1300	0	5	0	.2	20
19...	16.4	54	4	11.3	2000	0	7	4	.2	30
JULY										
10...	19.0	18	3	9.9	3000	0	5	0	.7	--
24...	17.2	17	4	10.3	5200	0	4	1	.0	10
AUG.										
14...	19.5	13	3	--	5000	0	4	0	.0	10
28...	16.6	16	2	10.3	9000	0	1	3	.0	0
SEP.										
11...	17.8	21	3	9.3	5000	0	2	3	.0	0
25...	13.5	23	6	10.3	17000	0	1	3	.0	80

12510500 YAKIMA RIVER AT KIONA, WASH.

LOCATION.--Lat 46°15'10", long 119°28'35", in SE¼NE¼ sec.19, T.9 N., R.27 E., Benton County, at highway bridge, 0.1 mi (0.2 km) downstream from gaging station at Kiona, 3.7 mi (6.0 km) downstream from Corral Canyon Creek, 5.1 mi (8.2 km) downstream from intake of Kiona Canal, and at mile 29.8 (47.9 km).

DRAINAGE AREA.--5,615 mi² (14,543 km²).

PERIOD OF RECORD.--Chemical analyses: December 1952 to September 1973.
Water temperatures: December 1952 to September 1973.

EXTREMES.--1972-73:
Specific conductance: Maximum observed, 410 micromhos Sept. 9, 17; minimum observed, 132 micromhos Dec. 29.
Water temperatures: Maximum observed, 26.5°C July 14, Aug. 11; minimum, freezing point on several days during winter months.

Period of record:
Specific conductance: Maximum observed, 674 micromhos Dec. 3, 1970; minimum observed, 99 micromhos Dec. 17, 1959.
Water temperatures: Maximum, 29.0°C July 18, 1960, July 12, 1961; minimum, freezing point on several days during winter months most year.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
OCT.											
16...	1115	3220	27	9.8	17	3.0	140	--	115	17	5.5
24...	1130	3080	23	8.9	15	2.4	132	--	108	15	5.1
NOV.											
14...	1015	2430	27	10	18	3.3	149	0	122	17	7.1
DEC.											
13...	0945	1700	25	10	18	2.9	145	0	119	17	6.7
JAN.											
09...	1230	4000	18	6.1	10	1.9	95	0	78	10	4.8
FEB.											
06...	1000	3030	20	7.9	13	2.3	111	--	91	14	5.3
MAR.											
13...	0930	2610	22	8.5	15	2.4	119	--	98	13	5.3
APR.											
10...	0830	1550	22	8.3	14	2.8	122	--	100	15	6.5
MAY											
09...	0845	1770	27	9.9	17	3.0	140	--	115	19	6.0
JUNE											
12...	0815	1510	30	10	19	3.8	156	--	128	21	6.9
JULY											
11...	0915	698	40	13	24	4.6	188	--	154	28	9.3
AUG.											
14...	0830	995	39	14	26	4.5	215	--	176	29	9.5
SEP.											
11...	0730	1150	39	14	26	5.0	214	--	176	26	9.1

12510500 YAKIMA RIVER AT KIONA, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)	ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT.											
16...	.88	.03	.06	.27	.33	.10	.02	110	0	273	8.1
24...	.81	.01	.11	.40	.51	.11	.06	94	0	260	8.3
NOV.											
14...	.60	.03	.14	.17	.31	.12	.10	110	0	290	8.2
DEC.											
13...	1.1	.01	.35	.09	.44	.12	.09	100	0	270	7.8
JAN.											
09...	.71	.01	.16	.14	.30	.09	.05	70	0	200	7.7
FEB.											
06...	.78	.02	.21	.62	.83	.12	.07	82	0	250	7.7
MAR.											
13...	.65	.04	.13	.83	.96	.12	.11	89	0	230	7.6
APR.											
10...	.79	.01	.17	.39	.56	.14	.04	89	0	280	8.2
MAY											
09...	1.0	.02	.19	.56	.75	.01	.01	108	0	320	7.9
JUNE											
12...	1.1	.03	.18	.52	.70	.15	.09	120	0	360	8.0
JULY											
11...	1.2	.02	.22	2.9	3.1	.20	.05	153	0	472	8.4
AUG.											
14...	1.0	.03	.20	1.4	1.6	.20	.06	155	0	750	8.4
SEP.											
11...	1.1	.02	.20	.71	.91	.14	.06	160	0	450	8.0

DATE	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT.											
16...	12.0	18	1	10.3	1.8	2000	0	3	4	.1	20
24...	11.2	16	1	10.4	1.1	1100	0	4	1	.5	0
NOV.											
14...	8.7	19	0	10.7	1.5	2700	0	5	1	.2	10
DEC.											
13...	.2	12	3	14.3	3.7	2500	0	1	1	.1	50
JAN.											
09...	1.3	21	4	12.1	3.0	8000	0	13	2	.1	20
FEB.											
06...	4.9	23	7	16.6	3.5	4000	0	6	300	.5	0
MAR.											
13...	8.0	26	4	10.9	4.8	2000	0	15	7	.0	10
APR.											
10...	12.2	34	10	10.2	1.2	200	0	10	190	.2	40
MAY											
09...	13.5	32	15	10.6	2.8	5000	0	17	16	.0	20
JUNE											
12...	15.9	39	10	6.7	2.5	1750	0	13	8	.4	20
JULY											
11...	21.0	26	45	7.6	1.2	2000	0	10	3	.0	--
AUG.											
14...	22.5	90	16	7.4	1.4	4000	0	8	2	.0	20
SEP.											
11...	19.0	23	9	7.0	3.4	4000	0	8	66	.0	10

12510500 YAKIMA RIVER AT KIONA, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	TEMPERATURE (DEG C)	ALDRIN (UG/L)	ALDRIN IN BOTTOM DEPOSITS (UG/KG)	CHLORDANE (UG/L)	CHLORDANE IN BOTTOM DEPOSITS (UG/KG)	DDD (UG/L)	DDD IN BOTTOM DEPOSITS (UG/KG)	DDE (UG/L)	DDE IN BOTTOM DEPOSITS (UG/KG)	DDT (UG/L)
DEC.											
18...	1520	.0	.00	.0	.0	0	.00	15	.00	17	.00
MAR.											
30...	1100	11.5	.00	--	.0	--	.00	--	.00	--	.00
JUNE											
01...	0915	17.0	.00	.0	.0	0	.00	.3	.00	2.9	.01
SEP.											
21...	1440	18.5	.00	--	.0	--	.00	--	.00	--	.01

DATE	DDT IN BOTTOM DEPOSITS (UG/KG)	DIAZINON (UG/L)	DIELDRIN (UG/L)	DIELDRIN IN BOTTOM DEPOSITS (UG/KG)	ENDRIN (UG/L)	ENDRIN IN BOTTOM DEPOSITS (UG/KG)	HEPTACHLOR (UG/L)	HEPTACHLOR IN BOTTOM DEPOSITS (UG/KG)	HEPTACHLOR EPOXIDE (UG/L)	HEPTACHLOR EPOXIDE IN BOTTOM DEPOSITS (UG/KG)
DEC.										
18...	2.8	.01	.00	.0	.00	.0	.00	.0	.00	.0
MAR.										
30...	--	.02	.01	--	.00	--	.00	--	.00	--
JUNE										
01...	2.0	.01	.01	.0	.00	.0	.00	.0	.00	.0
SEP.										
21...	--	.01	.01	--	.00	--	.00	--	.00	--

DATE	LINDANE (UG/L)	LINDANE IN BOTTOM DEPOSITS (UG/KG)	MALATHION (UG/L)	METHYL PARATHION (UG/L)	PARATHION (UG/L)	PCB (UG/L)	PCB IN BOTTOM DEPOSITS (UG/KG)	2,4-D (UG/L)	2,4,5-T (UG/L)	SILVEX (UG/L)
DEC.										
18...	.00	.0	.00	.00	.00	.0	0	.00	.00	.00
MAR.										
30...	.00	--	.00	.00	.02	.0	--	.00	.00	.00
JUNE										
01...	.00	.0	.00	.00	.00	.0	0	.71	.00	.00
SEP.										
21...	.00	--	.00	.00	.00	.0	--	.38	.00	.00

12510500 YAKIMA RIVER AT KIONA, WASH.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	295	272	253	144	197	206	253	188	305	360	292	405
2	288	284	265	143	199	236	252	189	308	365	300	380
3	298	283	265	145	207	219	235	190	295	375	---	320
4	304	277	260	147	213	217	238	200	290	382	---	325
5	293	265	251	149	216	225	239	200	230	388	---	325
6	308	258	246	155	222	236	259	199	282	385	---	370
7	323	254	260	162	234	244	259	192	295	385	---	390
8	323	253	277	169	248	202	247	202	315	385	285	375
9	316	249	287	180	242	245	238	189	322	385	302	410
10	307	265	291	194	231	240	241	187	310	382	335	400
11	311	278	297	181	231	242	253	197	300	380	275	380
12	310	286	294	181	234	247	267	219	230	382	265	380
13	312	288	286	176	239	241	285	210	312	388	275	380
14	316	294	262	172	173	226	299	211	322	265	270	380
15	308	294	256	152	184	206	291	309	340	262	265	380
16	279	295	261	136	174	248	291	307	345	265	267	400
17	276	301	250	139	173	249	268	303	345	270	330	410
18	279	292	241	138	178	249	366	249	338	250	355	390
19	280	291	236	144	196	250	290	220	330	252	380	385
20	283	293	233	142	194	254	289	260	322	255	375	390
21	256	300	237	145	209	280	295	270	302	265	360	390
22	256	305	228	145	210	266	298	285	310	269	362	390
23	252	304	161	147	211	263	298	300	312	290	375	390
24	264	301	144	158	204	273	304	320	352	255	370	395
25	276	301	145	176	207	265	309	318	360	249	370	400
26	275	291	153	177	203	266	304	278	345	249	380	395
27	269	285	164	188	201	267	284	245	325	270	385	390
28	261	287	155	194	216	257	269	250	328	265	376	390
29	258	249	132	198	---	257	279	262	340	276	405	395
30	254	237	139	196	---	254	200	225	355	285	385	400
31	---	---	141	197	---	256	---	288	---	287	400	---
MONTH	288	281	228	164	209	245	273	241	316	314	336	384

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.5	6.5	5.0	3.0	1.5	8.5	10.0	13.0	17.0	17.0	25.5	21.0
2	13.0	6.0	3.5	3.0	2.0	7.0	9.0	13.5	16.5	19.0	25.0	21.0
3	13.5	7.0	3.5	2.0	4.0	9.0	10.0	14.0	19.5	20.0	---	21.0
4	13.5	8.5	1.5	1.0	4.5	9.0	11.0	14.0	18.5	21.0	---	22.0
5	11.5	9.0	1.0	0.5	4.0	7.0	10.0	14.5	20.0	20.0	---	22.0
6	11.0	8.0	0.0	0.0	4.0	7.0	11.0	14.5	20.0	19.5	---	22.0
7	13.0	8.0	0.0	0.0	3.5	8.0	11.0	14.5	21.0	20.0	---	22.0
8	14.0	7.0	0.0	0.0	4.0	8.0	12.0	13.5	19.5	20.5	26.0	22.0
9	13.0	7.0	0.0	0.0	4.5	8.0	10.5	13.0	20.0	20.5	25.5	21.0
10	13.0	7.0	0.0	0.0	3.0	8.5	11.5	12.0	18.0	21.0	[illegible]	22.0
11	11.5	7.0	0.0	0.0	3.5	8.0	12.0	13.0	20.5	20.5	26.5	22.0
12	11.5	7.0	0.0	0.0	3.0	8.0	14.0	16.5	20.0	20.5	26.0	21.0
13	11.5	8.0	0.0	2.0	3.5	7.0	14.0	18.0	20.0	20.5	26.0	21.0
14	11.5	8.0	0.0	1.5	4.0	6.5	13.5	19.0	16.5	26.5	25.5	22.0
15	13.0	8.5	0.0	2.0	4.5	7.0	13.5	16.0	16.5	25.5	26.0	22.0
16	10.0	8.0	0.0	2.0	4.0	8.0	14.0	16.5	16.0	24.0	25.5	18.0
17	11.0	8.5	0.0	2.0	5.5	8.0	13.0	19.5	15.5	25.5	24.0	22.0
18	10.0	9.0	0.0	3.0	5.5	7.0	12.0	19.5	14.5	23.5	24.0	21.0
19	10.0	9.0	1.5	2.0	6.5	7.0	11.0	20.5	15.5	24.0	24.5	21.0
20	10.5	5.5	1.5	3.0	4.5	8.0	11.0	18.5	18.0	23.0	24.0	21.0
21	10.5	8.0	3.0	3.0	5.0	8.0	12.0	16.0	20.0	23.5	23.0	21.0
22	10.5	7.0	4.5	1.5	5.0	8.5	13.0	16.5	21.5	20.5	23.5	18.0
23	10.5	6.5	3.0	1.5	5.0	8.5	12.0	18.0	19.0	19.5	23.0	18.0
24	10.5	6.5	3.0	2.0	8.0	9.0	13.0	16.5	19.0	23.5	23.0	18.0
25	10.0	6.0	3.5	2.0	7.0	9.0	13.5	15.5	20.0	22.0	21.0	17.0
26	9.5	6.5	4.0	1.5	6.5	9.5	14.0	16.5	20.5	23.5	21.0	18.0
27	8.5	5.0	4.5	3.0	8.0	9.0	14.5	16.0	21.5	23.5	21.0	18.0
28	9.0	5.5	4.5	3.0	8.5	11.0	14.0	18.5	22.0	26.0	23.0	17.0
29	7.0	5.5	3.0	2.0	---	9.0	15.5	15.5	20.0	26.0	22.0	18.0
30	8.5	5.0	3.5	2.0	---	10.5	13.5	20.0	18.0	25.5	20.0	17.0
31	---	---	3.0	2.0	---	10.0	---	17.0	---	25.0	23.0	---
MONTH	11.0	7.0	2.0	1.5	4.5	8.0	12.5	16.0	19.0	22.5	24.0	20.0

13343500 SNAKE RIVER NEAR CLARKSTON, WASH.
(International hydrologic decade station)

LOCATION.--Lat 46°25'41", long 117°09'51", in SE¼SE¼ sec.16, T.11 N., R.45 E., Whitman County, at gaging station 7 mi (11.3 km) downstream from Clarkston, and at mile 132.9 (213.8 km).

DRAINAGE AREA.--103,200 mi² (267,300 km²), approximately.

PERIOD OF RECORD.--Chemical analyses: November 1951 to February 1956, October 1966 to December 1972 (discontinued).

REMARKS.--The analyses presented below represents a composit of four samples taken at cableway cross section 1,200 ft upstream from gage.

CHEMICAL ANALYSES, OCTOBER 1972 TO DECEMBER 1972

DATE	TIME	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)
DEC. 05...	1530	21	14	6.0	11	1.4	95	0	78	22

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	CARBON DIOXIDE (CO2) (MG/L)
DEC. 05...	8.6	.6	133	60	0	235	7.4	.4	4	6.1

DATE	TIME	DIS-SOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUS-PENDED GROSS ALPHA AS U-NAT. (UG/L)	DIS-SOLVED GROSS BETA AS CS-137 (PC/L)	SUS-PENDED GROSS BETA AS CS-137 (PC/L)	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUS-PENDED GROSS BETA AS SR90 /Y90 (PC/L)	DIS-SOLVED RA-226 (RADON METHOD) (PC/L)
DEC. 05...	1530	5.8	<.4	3.3	.5	2.7	.4	.02

13351500 WILLIAMS LAKE NEAR AMBER, WASH.

LOCATION.--Lat 47°19'02", long 117°42'28", in NE¼NW¼ sec.13, T.21 N., R.40 E., Spokane County, 2.5 mi (4.0 km) south of Amber.

DRAINAGE AREA.--23.4 mi² (60.6 km²).

PERIOD OF RECORD.--Chemical analyses: April 1973 to October 1973 (discontinued).

REMARKS.--Descriptive location given above is for southernmost point of lake. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, APRIL 1973 TO OCTOBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
APR., 1973											
04...	1020	3.0	7.9	.1	--	50	--	--	--	--	162
04...	1030	110	5.0	.7	--	220	--	--	--	--	163
MAY											
22...	1435	3.0	16.6	.2	30	20	--	--	--	--	164
22...	1445	112	5.7	2.1	290	1400	--	--	--	--	165
JULY											
10...	1315	3.0	20.7	.3	30	40	--	--	--	--	147
10...	1325	112	5.1	3.0	1400	1400	--	--	--	--	169
OCT.											
02...	1230	3.0	14.8	2.0	10	50	17	13	17	7.0	162
02...	1240	110	5.5	4.4	1500	1400	--	--	--	--	178

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
APR., 1973										
04...	--	133	--	--	.08	.00	.12	.26	.38	.04
04...	--	134	--	--	.14	.01	.20	.21	.41	.04
MAY										
22...	--	135	--	--	.02	.00	.06	.49	.55	.02
22...	--	135	--	--	.20	.00	.82	.38	1.2	.11
JULY										
10...	7	132	--	--	.02	.00	.03	.09	.12	.02
10...	--	139	--	--	.06	.00	1.3	1.3	2.6	.23
OCT.										
02...	--	133	4.3	3.3	.00	.00	.04	.47	.51	.01
02...	--	146	--	--	.01	.00	1.8	.90	2.7	.31

DATE	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR (PLATINUM-COBALT UNITS)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
APR., 1973										
04...	.00	--	--	--	--	--	242	5	5.4	6.0
04...	.00	--	--	--	--	--	236	10	--	--
MAY										
22...	.00	--	--	--	--	--	255	35	2.4	7.5
22...	.04	--	--	--	--	--	260	35	--	--
JULY										
10...	.00	--	--	--	--	--	249	0	3.2	8.0
10...	.18	--	--	--	--	--	248	0	--	--
OCT.										
02...	.00	144	.20	1	96	0	240	10	3.8	6.5
02...	.28	--	--	--	--	--	259	10	--	--

13351520 AMBER LAKE AT AMBER, WASH.

LOCATION.--Lat 47°20'35", long 117°43'15", in SW¼NE¼ sec.2, T.21 N., R.40 E., Spokane County, 0.8 mi (1.3 km) southeast of Amber.

DRAINAGE AREA.--7.38 mi^2 (19.11 km^2).

PERIOD OF RECORD.--Chemical analyses: April 1973 to October 1973 (discontinued).

REMARKS.--Descriptive location given above is for southernmost point of lake. Water samples taken elsewhere within lake body.

CHEMICAL ANALYSES, APRIL 1973 TO OCTOBER 1973

DATE	TIME	DEPTH (FT)	TEMPERATURE (DEG C)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED MANGANESE (MN) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)
APR., 1973											
04...	1430	3.0	8.0	1.2	--	10	--	--	--	--	158
04...	1435	34	7.0	1.3	--	30	--	--	--	--	160
MAY											
22...	1050	3.0	16.3	2.0	40	10	--	--	--	--	162
22...	1100	34	12.3	4.0	60	60	--	--	--	--	161
JULY											
10...	1010	3.0	21.0	2.6	30	20	--	--	--	--	147
10...	1020	32	14.7	9.6	150	340	--	--	--	--	166
OCT.											
02...	0925	3.0	14.0	8.6	60	60	17	13	18	8.4	163
02...	0935	30	13.8	9.1	70	50	--	--	--	--	163

DATE	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
APR., 1973										
04...	--	130	--	--	.02	.00	.09	.22	.31	.02
04...	--	131	--	--	.02	.00	.11	.22	.33	.03
MAY										
22...	--	133	--	--	.04	.00	.05	.66	.71	.02
22...	--	132	--	--	.02	.00	.14	.57	.71	.06
JULY										
10...	7	132	--	--	.02	.00	.10	3.9	4.0	.03
10...	--	136	--	--	.02	.00	.11	.10	.21	.05
OCT.										
02...	0	134	4.7	4.9	.02	.00	.16	.74	.90	.04
02...	--	134	--	--	.02	.00	.18	.78	.96	.04

DATE	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	SUSPENDED SOLIDS (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	COLOR (PLATINUM-COBALT UNITS)	CHLOROPHYLL A (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
APR., 1973										
04...	.00	--	--	--	--	--	250	10	1.9	8.0
04...	.00	--	--	--	--	--	240	10	--	--
MAY										
22...	.00	--	--	--	--	--	267	30	1.3	8.0
22...	.00	--	--	--	--	--	264	30	--	--
JULY										
10...	.00	--	--	--	--	--	260	0	7.9	11
10...	.01	--	--	--	--	--	272	0	--	--
OCT.										
02...	.01	155	.21	3	96	0	249	0	6.6	9.5
02...	.01	--	--	--	--	--	255	5	--	--

13353200 SNAKE RIVER AT BURBANK, WASH.

LOCATION.--Lat 46°12'59", long 119°01'22", in NE¼SW¼ sec.35, T.9 N., R.30 E., Franklin County, at U.S. Highway 395/410 bridge at Burbank, 2.2 mi (3.5 km) upstream from mouth and 7.5 mi (12.1 km) downstream from Ice Harbor Dam.

DRAINAGE AREA.--108,800 mi² (281,800 km²).

PERIOD OF RECORD.--Chemical analyses: July 1960 to September 1969, October 1971 to September 1972, February 1973 to September 1973. Prior to August 1962 records collected at site 0.7 mi (1.1 km) downstream and August 1962 to September 1963 at present site and published as "near Pasco". October 1963 to September 1965 records collected at present site and October 1965 to September 1969 and October 1971 to September 1972 at site 7.5 mi (12.1 km) upstream, all published as 13353000 "below Ice Harbor Dam".
Water temperatures: March 1973 to September 1973.

EXTREMES.--March to September 1973:
Specific conductance: Maximum, 333 micromhos Apr. 2, 3; minimum, 82 micromhos May 30.
Water temperatures: Maximum, 24.0°C Aug. 3, 7, 8; minimum, 7.0°C Mar. 30, 31.

CHEMICAL ANALYSES, FEBRUARY 1973 TO SEPTEMBER 1973

DATE	TIME	DIS-SOLVED SILICA (SIO2) (MG/L)	TOTAL IRON (FE) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)
FEB.										
01...	1300	22	420	50	0	26	8.6	17	2.9	119
26...	1100	23	--	--	--	33	12	24	3.4	155
MAR.										
27...	1100	24	--	--	--	33	11	22	3.5	152
APR.										
26...	1030	21	270	20	0	29	9.6	19	3.0	134
MAY										
24...	1030	14	--	--	--	14	4.2	9.2	1.7	72
JUNE										
25...	0935	11	--	--	--	13	3.6	8.8	1.1	62
JULY										
23...	1000	10	290	50	0	16	5.1	13	1.8	83
AUG.										
27...	0935	9.5	--	--	--	19	6.4	16	2.4	94
SEP.										
19...	1040	11	--	--	--	21	8.9	25	3.2	120

DATE	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)	ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)
FEB.										
01...	0	98	28	11	.4	.82	--	--	--	.43
26...	0	127	36	14	.5	.78	.01	.08	.23	.31
MAR.										
27...	0	125	35	14	.5	.80	.01	.13	.32	.45
APR.										
26...	0	110	27	12	.4	.41	.00	.12	1.4	1.5
MAY										
24...	0	59	14	5.1	.3	.17	.01	.07	.22	.29
JUNE										
25...	0	51	13	5.7	.3	.06	.00	--	--	.20
JULY										
23...	0	68	17	6.7	.3	.04	.01	.06	.18	.24
AUG.										
27...	0	77	24	9.0	.4	.09	.00	.10	.32	.42
SEP.										
19...	0	98	33	14	.4	.15	.00	--	--	.29

13353200 SNAKE RIVER AT BURBANK, WASH.--Continued

CHEMICAL ANALYSES, FEBRUARY 1973 TO SEPTEMBER 1973

DATE	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)
FEB.										
01...	.15	--	198	175	100	3	275	7.8	4.0	24
26...	--	--	216	222	130	5	275	7.8	4.2	6
MAR.										
27...	.07	--	236	218	130	3	395	8.2	8.8	11
APR.										
26...	.04	--	194	187	110	2	--	8.4	--	--
MAY										
24...	.04	.03	108	98	52	0	148	8.0	15.6	5
JUNE										
25...	.04	--	91	87	47	0	--	7.9	17.2	3
JULY										
23...	.02	.00	122	111	61	0	--	7.8	21.0	--
AUG.										
27...	.03	.01	153	133	74	0	--	7.8	21.5	3
SEP.										
19...	.03	--	184	176	89	0	--	7.8	19.5	4

DATE	CARBON DIOXIDE (CO2) (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)	FECAL COLI-FORM (COL. PER 100 ML)	STREP-TOCOCCI (COL-ONIES PER 100 ML)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COPPER (CU) (UG/L)
FEB.										
01...	3.0	4	2	6	3.5	3	20	10	0	60
26...	3.9	1	--	0	4.5	--	--	--	--	--
MAR.										
27...	1.5	3	1	0	--	--	--	--	--	--
APR.										
26...	.9	--	0	2	6.0	2	0	0	0	20
MAY										
24...	1.2	--	1	--	--	--	--	--	--	--
JUNE										
25...	1.2	112	1	48	--	--	--	--	--	--
JULY										
23...	2.1	38	2	9	3.0	2	<10	0	0	20
AUG.										
27...	2.4	6	0	3	--	--	--	--	--	--
SEP.										
19...	3.0	8	1	234	--	--	--	--	--	--

DATE	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
FEB.									
01...	20	100	3	.0	1	80	70	19	1710
26...	--	--	--	--	--	--	--	1	79
MAR.									
27...	--	--	--	--	--	--	--	12	1190
APR.									
26...	14	<100	2	.1	1	20	10	10	969
MAY									
24...	--	--	--	--	--	--	--	19	3760
JUNE									
25...	--	--	--	--	--	--	--	14	1800
JULY									
23...	10	<50	3	.0	3	20	20	7	365
AUG.									
27...	--	--	--	--	--	--	--	10	764
SEP.									
19...	--	--	--	--	--	--	--	8	635

13353200 SNAKE RIVER AT BURBANK, WASH.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), MARCH 1973 TO SEPTEMBER 1973

	FEBRUARY			MARCH			APRIL			MAY		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	330	330	330	260	253	256
2	---	---	---	---	---	---	333	330	331	255	248	251
3	---	---	---	---	---	---	333	330	332	250	247	248
4	---	---	---	---	---	---	332	331	332	247	245	247
5	---	---	---	---	---	---	332	330	331	248	247	247
6	---	---	---	---	---	---	331	320	328	249	247	248
7	---	---	---	---	---	---	326	320	323	251	248	250
8	---	---	---	---	---	---	324	320	320	254	251	253
9	---	---	---	---	---	---	326	320	323	255	253	254
10	---	---	---	---	---	---	324	317	322	256	254	255
11	---	---	---	---	---	---	319	307	314	259	255	257
12	---	---	---	---	---	---	308	294	302	258	247	253
13	---	---	---	---	---	---	297	286	293	248	239	243
14	---	---	---	---	---	---	286	281	284	239	229	233
15	---	---	---	---	---	---	286	281	283	229	225	227
16	---	---	---	---	---	---	284	280	282	224	222	223
17	---	---	---	---	---	---	285	280	282	222	210	215
18	---	---	---	---	---	---	284	280	282	213	190	203
19	---	---	---	---	---	---	284	280	282	194	187	189
20	---	---	---	---	---	---	287	280	284	187	179	183
21	---	---	---	---	---	---	289	284	286	180	169	174
22	---	---	---	---	---	---	289	285	287	170	154	163
23	---	---	---	---	---	---	289	286	288	158	146	153
24	---	---	---	---	---	---	292	287	290	---	---	---
25	---	---	---	---	---	---	294	289	291	---	---	---
26	---	---	---	---	---	---	297	290	294	124	111	116
27	---	---	---	---	---	---	297	294	296	110	100	103
28	---	---	---	---	---	---	296	288	294	101	90	93
29	---	---	---	---	---	---	286	276	283	92	84	87
30	---	---	---	330	328	329	273	259	267	85	82	84
31	---	---	---	331	330	330	---	---	---	86	84	85
ONTH	---	---	---	---	---	---	333	259	301	260	82	200

13353200 SNAKE RIVER AT BURBANK, WASH.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), MARCH 1973 TO SEPTEMBER 1973

	JUNE			JULY			AUGUST			SEPTEMBER		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	87	85	86	124	122	123	179	176	177	236	233	234
2	89	86	88	127	123	125	180	177	178	236	235	236
3	89	88	88	129	125	127	184	178	181	239	236	237
4	92	88	89	134	128	130	186	181	183	240	237	238
5	94	90	92	136	131	133	188	185	186	246	239	242
6	95	92	94	139	133	136	190	186	188	246	241	244
7	97	94	95	143	139	141	190	186	188	250	244	247
8	98	95	96	147	143	145	192	186	190	260	249	252
9	102	96	100	147	145	146	193	190	192	259	256	258
10	102	99	101	147	146	147	194	191	192	263	257	260
11	103	101	102	149	146	148	195	191	193	268	261	265
12	106	102	104	151	148	149	196	192	194	269	266	267
13	110	104	107	154	149	152	194	190	193	275	267	271
14	108	106	107	157	153	155	196	191	193	277	271	274
15	112	107	109	159	156	157	197	193	195	280	273	277
16	115	109	112	162	158	159	196	194	194	283	277	280
17	113	110	112	165	160	163	200	194	197	288	280	284
18	114	112	113	168	164	166	198	196	197	287	283	286
19	115	113	114	169	166	168	200	197	198	289	286	288
20	137	114	120	171	168	169	203	199	201	289	288	289
21	123	119	120	172	170	171	206	200	203	289	287	288
22	125	121	123	173	171	172	209	205	206	289	287	289
23	123	122	122	174	172	173	211	207	209	288	286	287
24	123	122	123	175	172	174	212	209	210	286	279	283
25	125	122	123	177	173	175	214	210	212	280	276	278
26	126	124	125	175	172	173	215	211	213	277	274	275
27	125	123	124	176	172	174	220	213	218	276	274	275
28	124	121	123	176	173	175	227	220	223	278	275	276
29	123	121	122	176	173	174	229	225	227	282	277	279
30	123	121	122	176	174	174	231	228	230	282	280	281
31	---	---	---	177	173	175	234	231	233	---	---	---
MONTH	137	85	109	177	122	156	234	176	200	289	233	268

13353200 SNAKE RIVER AT BURBANK, WASH.--Continued

TEMPERATURE (°C) OF WATER, MARCH 1973 TO SEPTEMBER 1973

DAY	MARCH MAX	MARCH MIN
30	7.5	7.0
31	7.5	7.0

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.0	7.5	12.5	11.5	14.0	13.5	18.0	16.5	23.5	22.0	21.5	20.5
2	8.0	7.5	12.0	11.5	14.0	13.5	17.5	16.5	23.5	22.5	22.0	20.5
3	8.5	7.5	12.0	11.5	14.0	13.5	18.0	17.0	24.0	22.5	22.0	21.0
4	8.5	8.0	12.5	11.5	14.0	13.5	18.5	17.0	23.5	22.5	21.5	21.0
5	8.5	8.0	13.0	12.0	14.0	13.5	18.0	17.0	23.5	22.5	22.0	21.0
6	8.5	8.0	12.5	12.0	14.0	13.5	18.5	17.5	23.5	22.0	21.0	20.5
7	9.0	8.0	13.0	12.0	14.5	14.0	19.5	18.0	24.0	22.5	21.0	20.5
8	9.5	8.0	13.0	12.5	15.0	14.5	20.0	18.5	24.0	23.0	21.5	20.5
9	9.5	8.5	13.0	12.5	15.5	15.0	19.5	18.5	23.5	23.0	21.5	20.5
10	9.5	8.5	13.5	13.0	15.5	15.0	20.0	18.5	23.5	22.5	21.5	20.5
11	10.0	9.0	13.5	13.0	16.0	15.5	20.5	18.5	23.5	22.5	21.5	20.5
12	10.0	9.5	14.0	13.0	16.0	15.5	20.5	19.5	23.5	23.0	21.0	20.5
13	10.0	9.5	14.0	13.0	16.0	15.0	20.5	19.5	23.5	23.0	21.0	20.0
14	10.5	9.5	14.0	13.0	16.0	15.0	21.0	20.0	23.5	23.0	21.0	20.0
15	10.5	9.5	14.0	13.5	16.0	15.0	21.5	20.0	23.5	22.5	21.0	19.5
16	10.5	9.5	14.5	14.0	16.0	15.5	21.5	20.0	23.5	22.5	20.5	19.5
17	10.5	9.5	15.0	14.5	16.0	15.0	21.5	20.0	23.5	21.5	20.5	19.5
18	10.5	9.5	15.0	14.5	16.0	15.5	22.0	20.5	23.5	22.0	20.0	19.5
19	10.5	9.5	15.0	14.5	16.5	15.5	22.5	21.0	23.0	22.0	19.5	19.0
20	10.5	9.5	14.5	14.0	16.5	15.5	21.5	21.0	23.5	22.5	19.5	19.0
21	11.0	10.0	15.0	14.0	17.0	16.0	22.0	21.0	23.5	22.5	19.5	18.5
22	11.0	10.0	15.5	14.5	17.0	16.5	22.0	21.0	23.0	22.0	19.0	18.5
23	11.0	10.0	15.5	15.0	17.0	16.5	22.5	21.0	22.5	21.5	19.5	19.0
24	11.0	10.5	---	---	17.5	17.0	22.5	21.5	22.0	21.0	19.0	18.5
25	11.5	10.5	---	---	17.0	16.5	23.0	21.5	23.0	21.5	20.0	18.5
26	11.5	10.5	14.5	14.0	17.5	16.5	23.0	21.5	22.5	21.5	19.5	18.5
27	11.5	11.0	14.0	13.5	17.5	16.5	23.0	21.5	22.5	21.5	19.5	18.5
28	12.0	11.0	14.0	13.5	18.0	17.0	22.5	21.5	22.0	21.0	19.5	18.5
29	12.5	11.5	14.0	13.5	17.5	16.5	23.0	21.5	22.5	21.5	19.5	18.5
30	12.5	11.5	13.5	13.5	17.0	16.5	22.5	21.5	22.0	21.0	19.0	18.5
31	---	---	14.0	13.5	---	---	23.5	21.5	21.5	20.5	---	---
MONTH	12.5	7.5	15.5	11.5	18.0	13.5	23.5	16.5	24.0	20.5	22.0	18.5

14105700 COLUMBIA RIVER NEAR THE DALLES, OREG.
(Irrigation network station)

LOCATION.--Lat 45°36'10", long 121°10'40", in NW¼ sec.3, T.1 N., R.13 E., Wasco County, at The Dalles Dam, 3.2 mi (5.1 km) upstream from gaging station, and 2.6 mi (4.2 km) northeast of The Dalles.

DRAINAGE AREA.--237,000 mi^2 (613,800 km^2), approximately (upstream from gaging station).

PERIOD OF RECORD.--Chemical analyses: December 1950 to September 1973.
Water temperatures: December 1950 to September 1969.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)
NOV.										
09...	1445	9.9	22	6.4	9.9	1.6	97	0	80	22
DEC.										
19...	1420	9.2	24	6.4	13	1.5	96	0	79	20
JAN.										
31...	1135	14	28	7.6	12	2.1	114	0	94	26
MAR.										
09...	1040	11	26	6.8	8.0	1.6	106	0	87	22
APR.										
17...	1500	10	23	6.3	7.5	1.5	94	0	77	19
JUNE										
07...	1250	6.5	19	4.5	5.8	1.4	76	0	62	13
JULY										
12...	1500	5.1	17	4.1	5.0	1.1	71	0	58	15
SEP.										
29...	1600	3.9	21	4.4	4.2	1.1	77	0	63	14

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	CARBON DIOXIDE (CO2) (MG/L)
NOV.										
09...	4.6	.2	--	125	81	2	206	7.5	10.5	4.9
DEC.										
19...	4.1	.4	--	127	86	8	199	7.9	2.5	1.9
JAN.										
31...	6.5	.4	--	154	100	8	242	7.9	3.0	2.3
MAR.										
09...	1.5	.3	--	131	93	6	219	7.8	5.6	2.7
APR.										
17...	3.8	.3	--	119	83	6	205	7.7	8.7	3.0
JUNE										
07...	3.3	.4	--	91	66	4	151	7.2	16.0	7.7
JULY										
12...	2.4	.2	.06	85	59	1	143	7.8	20.5	1.8
SEP.										
29...	3.3	.2	.07	90	71	7	150	7.7	20.7	2.5

14113000 KLICKITAT RIVER NEAR PITT, WASH.

LOCATION.--Lat 45°45'24", long 121°12'32", in NE¼SW¼ sec.8, T.3 N., R.13 E., Klickitat County, at footbridge 250 ft (76 m) upstream from gaging station, 2.8 mi (4.5 km) south of Pitt, and at mile 7.0 (11.3 km).

DRAINAGE AREA.--1,297 mi² (3,359 km²).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)
OCT.											
04...	1000	950	.01	.00	.01	.25	.26	.03	.02	69	7.8
17...	0805	875	.03	.00	.03	.05	.08	.04	.03	71	7.6
31...	0720	821	.02	.01	.02	.01	.03	.04	.03	94	7.5
NOV.											
14...	0710	930	.03	.00	.03	.06	.09	.04	.03	83	7.6
28...	0710	1030	.06	.00	.05	.03	.08	.04	.03	64	7.5
DEC.											
20...	1030	1720	.15	.01	.14	.23	.37	.14	.06	58	7.2
27...	1045	2280	.23	.00	.07	.06	.13	.05	.28	66	7.5
JAN.											
09...	1115	1060	.13	.00	.03	.05	.08	.04	.03	82	7.1
23...	1005	1830	.23	.00	.06	.08	.14	.03	.02	76	7.5
FEB.											
06...	1020	1240	.19	.00	.04	.14	.18	.05	.21	84	7.2
21...	1045	1080	.11	.00	.02	.15	.17	.04	.01	92	7.4
MAR.											
06...	1010	1450	.04	.01	.05	.11	.16	.03	.02	80	7.7
20...	1010	1280	.04	.00	.02	.14	.16	.03	.03	49	7.7
APR.											
03...	1005	1100	.04	.00	.05	.07	.12	.03	.03	76	7.5
17...	1035	1480	.03	.00	.05	.07	.12	.04	.02	75	8.0
MAY											
08...	1045	1350	.05	.00	.04	.10	.14	.04	.02	260	7.5
15...	1045	1520	.02	.00	.05	.02	.07	.03	.02	68	7.4
JUNE											
06...	1115	1160	.02	.02	.03	.06	.09	.03	.02	73	7.7
19...	1215	940	.02	.00	.06	.01	.07	.03	.02	81	7.9
JULY											
11...	1155	848	.01	.00	.07	.03	.10	.03	.02	83	8.1
24...	1405	758	.01	.00	.03	.12	.15	.04	.03	86	8.2
AUG.											
14...	1340	740	.00	.00	.07	.05	.12	.08	.03	88	8.1
28...	1245	638	.02	.00	.04	.03	.07	.04	.03	180	7.9
SEP.											
11...	1250	700	.01	.00	.08	.04	.12	.05	.03	85	8.1
25...	1210	785	.01	.00	.03	.08	.11	.05	.03	91	7.9

14113000 KLICKITAT RIVER NEAR PITT, WASH.--Wash.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
OCT.										
04...	8.5	26	3	11.4	2000	0	1	3	4.0	10
17...	6.6	11	10	11.5	350	0	3	9	8.0	10
31...	3.7	9	2	12.7	230	0	7	2	.2	10
NOV.										
14...	6.2	15	4	12.4	100	0	2	1	.2	0
28...	5.1	4	2	12.7	270	0	0	0	.2	10
DEC.										
20...	2.6	65	20	13.1	>800	0	4	7	2.3	40
27...	5.8	50	8	12.4	1200	0	1	1	.0	60
JAN.										
09...	1.1	21	3	14.6	140	0	16	2	1.0	20
23...	2.4	44	8	13.6	300	0	3	2	.2	10
FEB.										
06...	3.8	23	6	13.5	<100	0	4	1	.0	10
21...	5.0	18	3	13.8	700	0	1	2	.2	20
MAR.										
06...	5.8	54	5	12.7	<100	20	1	4	.1	30
20...	6.5	14	2	12.7	78	0	4	4	.1	0
APR.										
03...	6.7	18	2	12.9	800	0	6	0	.1	0
17...	8.5	18	2	12.0	450	0	18	8	.2	30
MAY										
08...	10.1	10	2	11.7	400	0	7	7	.0	20
15...	14.0	21	2	10.8	350	0	9	6	.0	30
JUNE										
06...	15.8	39	2	10.8	1200	0	3	1	.2	0
19...	14.5	11	1	10.8	500	0	6	8	.1	10
JULY										
11...	15.5	8	10	10.5	250	0	3	1	.0	0
24...	17.4	13	4	10.8	120	0	3	2	.0	0
AUG.										
14...	18.4	170	20	9.5	<40	0	4	2	.1	10
28...	14.6	9	3	10.0	250	0	1	1	.0	20
SEP.										
11...	16.4	17	10	10.0	1200	0	4	6	.0	20
25...	11.8	14	4	11.2	950	0	1	4	.1	10

14126600 WIND RIVER BELOW DRY CREEK NEAR CARSON, WASH.

LOCATION.--Lat 45°52'50", long 121°58'38", in NE¼ sec.31, T.5 N., R.7 E. (unsurveyed), Skamania County, Gifford-Pinchot National Forest, temperature recorder 100 ft (30 m) downstream from Dry Creek, 13.5 mi (21.7 km) northwest of Carson, and at mile 19.1 (30.7 km).

DRAINAGE AREA.--79.0 mi² (204.6 km²).

PERIOD OF RECORD.--Water temperatures: May 1973 to September 1973.

EXTREMES.--May to September 1973:
Water temperatures: Maximum, 16.0°C July 27 to Aug. 6, Aug. 8, 13, 14; minimum, 6.0°C May 9-11.

TEMPERATURE (°C) OF WATER, MAY 1973 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	---	---	9.5	9.0	12.0	11.0	16.0	15.0	12.0	10.5
2	---	---	---	---	10.0	9.0	12.0	11.5	16.0	15.0	11.5	10.5
3	---	---	---	---	10.0	9.0	12.5	11.5	16.0	15.0	11.5	11.0
4	---	---	---	---	10.0	9.5	12.5	12.0	16.0	15.0	12.0	11.0
5	---	---	---	---	11.0	10.0	12.5	12.0	16.0	15.0	13.0	11.5
6	---	---	---	---	10.5	10.0	12.0	12.0	16.0	15.0	13.0	12.5
7	---	---	---	---	10.5	10.0	12.0	11.5	15.5	15.0	12.5	12.0
8	---	---	---	---	10.0	10.0	12.5	11.5	16.0	15.0	12.5	11.5
9	---	---	---	6.0	10.5	10.0	12.5	11.5	15.5	15.0	12.5	12.0
10	---	---	6.5	6.0	10.5	9.5	12.5	12.0	15.5	15.0	13.0	12.0
11	---	---	7.5	6.0	10.5	10.0	12.5	12.0	15.0	14.0	13.0	12.5
12	---	---	8.0	6.5	10.5	10.0	14.0	12.0	15.0	14.5	13.0	12.5
13	---	---	9.5	7.5	10.5	10.0	14.0	13.0	16.0	15.0	12.0	11.5
14	---	---	9.5	9.0	10.0	10.0	14.5	13.5	16.0	15.0	12.0	11.5
15	---	---	9.5	9.0	10.0	10.0	15.0	14.0	15.5	15.0	11.5	11.0
16	---	---	9.5	9.0	10.0	10.0	15.0	14.0	15.0	14.0	11.5	10.0
17	---	---	10.0	9.0	10.0	9.5	15.5	14.0	14.0	12.5	10.5	10.5
18	---	---	10.0	9.0	10.0	9.5	15.5	14.5	13.0	11.5	11.0	10.5
19	---	---	9.5	9.0	11.0	10.0	15.5	15.0	12.5	11.5	10.5	10.5
20	---	---	9.0	9.0	12.0	10.0	15.5	15.0	13.0	12.0	10.5	10.5
21	---	---	9.0	8.5	12.0	11.5	15.0	14.5	12.5	12.0	10.5	10.5
22	---	---	9.0	8.5	13.0	12.0	14.5	14.0	12.5	11.5	10.5	10.5
23	---	---	9.0	9.0	12.5	12.0	14.0	12.5	12.0	11.5	10.5	10.5
24	---	---	9.0	8.5	12.0	12.0	13.0	12.5	12.0	12.0	10.5	10.5
25	---	---	9.0	8.5	12.0	12.0	14.0	13.0	12.5	12.0	10.5	10.5
26	---	---	8.5	8.0	12.5	12.0	15.0	13.5	12.5	12.0	10.5	10.0
27	---	---	8.0	8.0	13.0	12.0	16.0	14.5	12.5	12.0	10.5	10.0
28	---	---	9.0	8.0	13.0	12.0	16.0	15.0	13.0	12.0	10.5	10.0
29	---	---	9.5	8.5	12.5	12.0	16.0	15.0	13.0	12.0	10.5	10.5
30	---	---	10.0	9.0	12.0	11.5	16.0	15.0	13.0	12.0	10.5	10.0
31	---	---	10.0	9.5	---	---	16.0	15.0	12.5	12.0	---	---
MONTH	---	---	---	---	13.0	9.0	16.0	11.0	16.0	11.5	13.0	10.0

14128500 WIND RIVER NEAR CARSON, WASH.

LOCATION.--Lat 45°43'37", long 121°47'37", in SE¼SE¼ sec.21, T.3 N., R.8 E., Skamania County, at footbridge 200 ft (61 m) downstream from Little Wind River, 0.8 mi (1.3 km) downstream from gaging station and 1.2 mi (1.9 km) east of Carson.

DRAINAGE AREA.--225 mi² (583 km²).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
OCT.											
04...	1115	242	7.0	2.4	4.3	.6	31	--	25	2.5	3.4
17...	0905	209	5.6	1.6	4.8	.7	27	--	22	8.0	4.3
31...	0830	193	5.2	1.4	4.4	.5	30	--	25	2.1	3.4
NOV.											
14...	0820	710	5.2	1.0	2.9	.3	24	0	20	1.8	2.5
28...	0825	1160	4.3	.9	2.9	.3	23	--	19	2.4	1.6
DEC.											
20...	1155	7620	3.4	.6	2.6	.4	18	0	15	3.4	1.1
27...	1145	4700	3.2	.6	2.7	.4	19	0	15	3.6	1.6
JAN.											
09...	1235	840	5.5	.8	4.1	.3	24	0	20	1.6	1.8
23...	1105	1400	3.9	.8	2.3	.3	22	--	18	2.5	1.8
FEB.											
06...	1125	765	4.6	1.0	2.8	.3	25	--	21	2.1	1.8
21...	1120	678	4.7	1.0	3.7	.7	25	--	21	1.6	.6
MAR.											
06...	1120	1340	4.0	.7	2.7	.3	23	--	19	1.8	2.2
20...	1130	1070	3.9	.8	3.5	.4	22	--	18	1.3	1.2
APR.											
03...	1105	652	4.3	1.0	3.3	.4	24	--	20	1.3	1.9
17...	1200	1000	3.9	.8	3.1	.2	22	--	18	3.0	2.1
MAY											
08...	1140	612	4.2	1.0	3.5	.5	25	--	21	1.5	1.9
15...	1145	574	4.6	.9	3.3	.4	23	--	19	2.7	2.2
JUNE											
06...	1210	359	4.9	1.1	3.5	.7	32	--	26	.9	2.6
19...	1335	442	4.8	1.2	3.7	.5	29	--	24	2.0	2.1
JULY											
11...	1300	268	5.5	2.0	4.0	.7	29	--	24	1.8	2.3
24...	1530	210	7.2	1.4	4.4	.6	31	--	25	1.5	2.7
AUG.											
15...	1435	168	5.7	1.6	5.4	.7	34	--	28	3.0	4.2
28...	1345	151	5.6	1.4	5.0	.6	32	--	26	1.8	3.7
SEP.											
11...	1355	138	5.5	1.6	5.4	.7	34	--	28	1.8	3.5
25...	1345	417	5.9	1.1	4.0	.6	34	--	28	1.8	2.2

14128500 WIND RIVER NEAR CARSON, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)	ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT.											
04...	.04	.00	.05	.34	.39	.01	.01	27	2	54	7.8
17...	.02	.00	.10	.35	.45	.02	.02	21	0	54	7.6
31...	.02	.00	.01	.02	.03	.02	.02	19	0	60	7.6
NOV.											
14...	.06	.00	.02	.07	.09	.00	.01	17	0	140	7.6
28...	.04	.00	.04	.05	.09	.01	.01	14	0	36	7.4
DEC.											
20...	.08	.00	.14	.07	.21	.11	.02	11	0	31	7.3
27...	.06	.00	.09	.09	.18	.05	.01	10	0	38	6.9
JAN.											
09...	.07	.00	.03	.00	.03	.05	.03	17	0	49	7.1
23...	.02	.00	.02	.00	.02	.00	.00	13	0	44	7.4
FEB.											
06...	.02	.00	.01	.02	.03	.01	.00	16	0	48	7.1
21...	.03	.00	.01	.10	.11	.02	.01	15	0	59	7.6
MAR.											
06...	.01	.00	.03	.07	.10	.01	.01	12	0	41	7.6
20...	.02	.00	.03	.05	.08	.02	.02	13	0	150	7.4
APR.											
03...	.02	.00	.04	.06	.10	.02	.01	14	0	52	7.4
17...	.01	.00	.04	.06	.10	.02	.01	13	0	44	7.8
MAY											
08...	.02	.00	.03	.07	.10	.03	.02	14	0	56	8.0
15...	.02	.00	.03	.03	.06	.01	.01	15	0	47	7.4
JUNE											
06...	.01	.00	.02	.04	.06	.04	.01	17	0	55	7.6
19...	.02	.00	.07	--	--	.01	.01	16	0	56	7.7
JULY											
11...	.01	.00	.02	.03	.05	.05	.01	22	0	62	8.0
24...	.01	.00	.01	.05	.06	.02	.01	24	0	67	7.9
AUG.											
15...	.00	.00	.02	.04	.06	.02	.02	20	0	76	7.7
28...	.39	.00	.06	.03	.09	.02	.02	20	0	74	8.0
SEP.											
11...	.01	.00	.06	.05	.11	.02	.02	20	0	72	8.1
25...	.03	.00	.03	.10	.13	.02	.01	19	0	57	7.6

14128500 WIND RIVER NEAR CARSON, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT.											
04...	8.9	40	20	11.8	.8	300	0	0	3	.1	10
17...	7.8	27	3	11.7	1.1	120	0	1	4	.3	0
31...	4.8	7	1	12.7	1.2	80	0	2	1	1	0
NOV.											
14...	6.4	15	2	12.3	1.0	150	0	1	1	.1	50
28...	5.6	6	1	13.5	1.5	150	0	2	0	.2	30
DEC.											
20...	4.7	53	40	13.7	1.4	500	0	5	12	.6	10
27...	6.8	32	12	13.3	3.8	350	0	2	1	.0	20
JAN.											
09...	1.9	20	4	14.6	3.1	120	0	1	0	.1	110
23...	4.5	11	2	14.0	1.4	100	0	1	1	.1	20
FEB.											
06...	4.5	7	3	13.9	3.2	50	0	5	1	.1	0
21...	5.7	11	3	13.4	1.0	40	10	2	3	.0	50
MAR.											
06...	6.1	57	2	13.5	.9	40	0	0	4	.0	20
20...	6.0	110	10	13.0	1.4	800	0	4	0	.1	0
APR.											
03...	7.2	12	3	13.2	1.5	40	0	2	0	.0	0
17...	8.0	19	3	12.7	.6	250	0	7	4	.1	10
MAY											
08...	9.2	40	3	12.2	.4	400	0	9	5	.0	20
15...	13.5	14	1	11.3	1.5	120	0	7	2	.1	10
JUNE											
06...	14.0	16	1	11.0	1.3	250	0	2	1	.3	20
19...	13.8	12	1	10.8	.9	200	0	4	6	.0	20
JULY											
11...	14.7	7	2	10.8	.5	100	0	3	1	.0	10
24...	16.2	36	1	10.4	.6	60	0	1	2	.0	10
AUG.											
15...	16.7	6	1	10.1	1.1	180	0	1	1	.0	0
28...	14.3	5	1	10.3	.5	150	0	0	1	.0	0
SEP.											
11...	15.6	5	1	10.2	.4	200	0	6	5	.0	0
25...	12.0	23	1	11.2	1.4	580	0	0	4	.0	20

14211897 BURNTBRIDGE CREEK AT BURTON ROAD AT VANCOUVER, WASH.

LOCATION.--Lat 45°38'23", long 122°34'50", on north line of SE¼SE¼ sec.20, T.2 N., R.2 E., Clark County, at Burton Road bridge, 0.7 mi (1.1 km) northeast of east Vancouver city limits and at mile 8.4 (13.5 km).

DRAINAGE AREA.--7.91 mi^2 (20.49 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
OCT.							
04...	1305	--	1.3	.01	.02	.08	.06
17...	1050	--	1.2	.00	.03	.07	.06
31...	1020	3.1	1.3	.01	.05	.09	.06
NOV.							
14...	1025	3.2	1.6	.01	.06	.07	.06
28...	1005	4.6	3.5	.02	.19	.10	.05
DEC.							
20...	1350	11	5.3	.02	.22	.20	.11
27...	1320	17	3.6	.02	.21	.19	.12
JAN.							
09...	1340	6.9	2.6	.01	.05	.07	.04
23...	1220	9.9	1.2	.01	.06	.05	.03
FEB.							
06...	1240	7.2	1.1	.03	.28	.26	.13
21...	1240	6.5	2.4	.01	.06	.05	.03
MAR.							
06...	1300	7.5	2.5	.02	.08	.06	.02
20...	1300	9.1	2.7	.01	.14	.17	.14
APR.							
03...	1235	6.5	1.8	.01	.09	.06	.03
17...	1320	6.0	1.5	.01	.18	.06	.04
MAY							
08...	1300	2.8	1.6	.01	.15	.08	.04
15...	1345	2.3	.01	.03	.30	.17	.05
JUNE							
06...	1340	1.5	1.9	.02	.13	.08	.04
19...	1500	1.3	1.6	.02	.20	.12	.07
JULY							
11...	1430	1.7	1.2	.01	.17	.09	.04
24...	1710	1.5	1.3	.02	.15	.09	.03
AUG.							
15...	1615	1.5	1.1	.01	.23	.12	.06
28...	1515	1.6	1.0	.01	.14	.08	.05
SEP.							
11...	1520	1.4	.67	.01	.20	.09	.05
25...	1505	2.8	2.3	.03	.31	.15	.08

14211897 BURNTBRIDGE CREEK AT BURTON ROAD AT VANCOUVER, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.							
04...	110	7.7	12.2	58	15	10.6	1800
17...	120	7.7	10.0	8	6	10.1	4000
31...	125	7.5	7.4	31	6	11.3	4500
NOV.							
14...	140	7.4	7.8	44	4	11.4	1000
28...	150	7.2	8.6	2	1	10.5	5000
DEC.							
20...	160	6.9	8.2	42	30	9.6	<8000
27...	117	7.1	8.7	151	15	9.4	7500
JAN.							
09...	150	7.2	3.3	26	6	13.1	1400
23...	150	7.2	6.9	52	5	11.8	600
FEB.							
06...	140	7.2	7.5	34	6	12.5	400
21...	150	7.6	9.6	32	6	12.3	900
MAR.							
06...	135	7.5	12.5	65	6	11.7	250
20...	170	7.6	10.2	116	18	11.8	6000
APR.							
03...	150	7.6	13.3	44	8	11.8	900
17...	130	7.7	11.8	46	9	11.8	4000
MAY							
08...	130	7.6	14.7	48	7	10.2	5000
15...	140	7.4	21.0	66	30	8.9	3500
JUNE							
06...	150	7.4	20.1	41	6	9.1	6000
19...	150	7.8	24.5	44	9	8.0	700
JULY							
11...	150	7.7	13.0	7	7	8.5	3750
24...	140	7.6	23.2	29	3	8.0	4200
AUG.							
15...	140	7.6	23.8	70	5	7.1	7400
28...	140	8.1	21.3	40	6	8.1	10000
SEP.							
11...	130	7.8	22.4	50	6	7.7	3600
25...	150	7.3	16.8	129	20	8.4	10000

14211903 BURNTBRIDGE CREEK AT MOUTH AT VANCOUVER, WASH.

LOCATION.--Lat 45°39'42", long 122°40'16", on west line of NW¼NE¼ sec.15, T.2 N., R.1 E., Clark County, at road bridge, 0.2 mi (0.3 km) downstream from Cold Canyon, 0.5 mi (0.8 km) north of Vancouver city limits, and at mile 1.6 (2.6 km).

DRAINAGE AREA.--25.8 mi^2 (66.8 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
OCT.							
04...	1335	--	1.7	.01	.05	.09	.08
17...	1125	--	1.5	.00	.05	.09	.07
31...	1055	3.7	1.7	.01	.07	.09	.06
NOV.							
14...	1055	8.0	1.7	.00	.06	.09	.07
28...	1035	11	3.6	.02	.15	.13	.05
DEC.							
20...	1425	25	3.6	.02	.26	.42	.04
27...	1345	37	3.2	.02	.19	.22	.11
JAN.							
09...	1440	15	3.2	.01	.09	.12	.05
23...	1250	16	1.3	.01	.08	.08	.03
FEB.							
06...	1320	13	2.2	.01	.05	.07	.02
21...	1350	11	2.8	.00	.05	.07	.03
MAR.							
06...	1330	13	2.6	.01	.11	.08	.04
20...	1330	16	2.5	.01	.12	.13	.09
APR.							
03...	1305	11	1.9	.01	.07	.07	.04
17...	1345	13	1.5	.02	.22	.12	.05
MAY							
08...	1325	6.4	1.6	.01	.16	.11	.04
15...	1410	4.8	1.7	.02	.17	.17	.08
JUNE							
06...	1440	2.4	1.7	.03	.09	.13	.07
19...	1525	2.8	1.4	.01	.13	.09	.07
JULY							
11...	1510	2.1	1.3	.01	.16	.12	.08
24...	1750	2.6	1.4	.01	.05	.22	.12
AUG.							
15...	1650	2.1	1.4	.00	.08	.12	.09
28...	1545	2.5	1.2	.00	.07	.10	.07
SEP.							
11...	1555	2.4	2.4	.02	.38	.19	.07
25...	1535	6.0	.95	.01	.18	.13	.05

14211903 BURNTBRIDGE CREEK AT MOUTH AT VANCOUVER, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.							
04...	140	7.7	12.2	80	15	10.3	3500
17...	180	7.7	9.5	36	8	10.7	>4000
31...	170	7.7	6.5	32	5	11.8	7000
NOV.							
14...	200	7.6	7.5	52	5	11.3	<8000
28...	150	7.4	7.6	0	20	11.4	12000
DEC.							
20...	140	7.2	8.3	170	70	11.0	16000
27...	130	6.9	8.8	160	17	10.5	5000
JAN.							
09...	190	7.4	1.9	36	14	14.0	7500
23...	190	7.6	6.2	60	8	12.4	1500
FEB.							
06...	97	7.3	7.2	44	8	12.2	1000
21...	180	7.7	8.9	34	7	11.8	1700
MAR.							
06...	170	7.6	11.1	64	8	11.2	1000
20...	81	7.6	9.5	77	10	11.1	1700
APR.							
03...	170	7.8	11.9	47	8	11.5	2000
17...	130	7.7	11.4	92	40	10.5	8000
MAY							
08...	150	7.6	12.3	62	7	10.3	16000
15...	170	7.4	19.4	49	15	9.0	4000
JUNE							
06...	210	7.7	16.7	39	7	9.8	<16000
19...	190	7.9	17.4	40	6	8.9	16000
JULY							
11...	220	8.0	16.5	19	4	9.7	45000
24...	240	8.0	15.6	83	6	9.5	4400
AUG.							
15...	260	7.9	16.6	44	3	8.4	9400
28...	200	7.9	15.0	40	3	9.4	22500
SEP.							
11...	230	7.8	16.6	60	65	8.6	43000
25...	130	7.5	14.4	90	15	9.2	380

14212300 SALMON CREEK ABOVE WEAVER CREEK, NEAR BRUSH PRAIRIE, WASH.

LOCATION.--Lat 45°44'57", long 122°31'32", on east line of NE¼NW¼ sec.14, T.3 N., R.2 E., Clark County, at road bridge, 1.5 mi (2.4 km) upstream from Weaver Creek, and 1.5 mi (2.4 km) northeast of Brush Prairie.

DRAINAGE AREA.--34.2 mi^2 (88.6 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973(discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
OCT.							
04...	1425	--	.16	.00	.05	.03	.02
17...	1210	--	.04	.00	.10	.01	.01
31...	1155	7.0	.15	.00	.08	.03	.00
NOV.							
14...	1150	21	.46	.01	.08	.03	.00
28...	1135	140	.90	.00	.11	.02	.00
DEC.							
20...	1520	312	1.0	.00	.11	.06	.01
27...	1440	750	.67	.00	.09	.04	.01
JAN.							
09...	1550	72	.49	.00	.04	.03	.00
23...	1335	110	.54	.01	.05	.01	.00
FEB.							
06...	1410	49	1.1	.01	.15	.09	.03
21...	1440	54	.52	.01	.17	.02	.00
MAR.							
06...	1500	87	.52	.00	.09	.02	.01
20...	1500	147	.57	.01	.05	.03	.01
APR.							
03...	1450	64	.39	.01	.08	.02	.00
17...	1445	53	.39	.01	.17	.13	.02
MAY							
08...	1425	44	.22	.00	.10	.03	.01
15...	1520	31	.20	.01	.12	.03	.02
JUNE							
06...	1520	15	.17	.01	.08	.02	.00
19...	1620	21	.24	.01	.10	.03	.01
JULY							
11...	1600	14	.14	.00	.16	.98	.01
24...	1925	6.5	.09	.00	.07	.34	.02
AUG.							
15...	1800	4.0	.25	.01	.12	.06	.02
28...	1635	4.0	.01	.01	.22	.08	.02
SEP.							
11...	1700	2.0	.09	.00	.19	.05	.02
25...	1625	20	.59	.01	.12	.04	.01

14212300 SALMON CREEK ABOVE WEAVER CREEK, NEAR BRUSH PRAIRIE, WASH.--Continued

CHEMICAL ANALYSES. WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	DIS-SOLVED OXYGEN (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)
OCT.							
04...	53	7.6	12.5	10	10	10.5	2300
17...	59	7.4	10.2	111	5	9.9	310
31...	150	7.5	6.5	100	10	11.7	800
NOV.							
14...	52	7.4	7.6	77	8	11.5	500
28...	41	7.1	7.8	8	10	11.6	3000
DEC.							
20...	37	6.9	7.8	70	20	11.3	8000
27...	32	6.9	8.4	59	13	11.2	4000
JAN.							
09...	43	6.9	1.5	33	7	13.9	900
23...	42	7.2	5.3	37	7	12.6	4000
FEB.							
06...	49	7.2	5.7	34	7	12.8	350
21...	50	7.2	7.7	37	8	12.5	440
MAR.							
06...	48	7.6	9.7	53	8	11.6	700
20...	86	7.4	8.2	73	9	11.7	700
APR.							
03...	47	7.4	10.3	40	6	12.0	180
17...	55	7.6	10.6	72	15	11.4	1000
MAY							
08...	47	7.6	11.7	69	6	11.2	900
15...	55	7.6	20.5	57	7	9.7	900
JUNE							
06...	59	7.8	17.5	56	6	10.0	500
19...	57	7.5	18.7	58	6	9.5	600
JULY							
11...	60	7.7	20.5	53	5	9.2	275
24...	68	8.2	20.0	14	5	9.1	120
AUG.							
15...	81	7.7	20.6	84	12	8.6	3200
28...	71	7.7	18.3	96	30	9.4	2500
SEP.							
11...	74	7.7	20.4	94	7	8.7	2000
25...	36	7.3	14.4	104	8	9.9	6400

14212400 WEAVER CREEK AT BRUSH PRAIRIE, WASH.

LOCATION.--Lat 45°44'34", long 122°32'43", in NW¼SE¼ sec.15, T.3 N., R.2 E., Clark County, at road bridge 400 ft (122 m) upstream from mouth, and 0.7 mi (1.1 km) north of Brush Prairie.

DRAINAGE AREA.--6.47 mi^2 (16.76 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
OCT.							
04...	1440	--	--	--	--	--	--
17...	1230	--	--	--	--	--	--
31...	1215	1.7	1.6	.03	1.9	2.0	1.7
NOV.							
09...	1100	--	--	--	--	--	--
14...	1210	1.7	1.9	.07	1.2	1.2	1.2
28...	1200	17	1.4	.04	.75	1.2	1.1
DEC.							
20...	1535	6.0	1.0	.00	.12	.07	.01
27...	1500	95	1.2	.01	.29	.01	.01
JAN.							
09...	1610	12	1.2	.02	.33	.14	.14
23...	1345	18	1.1	.03	.29	.20	.11
FEB.							
06...	1420	8.0	.50	.01	.07	.03	.00
21...	1500	7.5	1.0	.03	.28	.27	.14
MAR.							
06...	1520	20	1.2	.04	.27	.34	.17
20...	1515	27	1.2	.01	.12	.29	.20
APR.							
03...	1510	12	1.0	.04	.24	.39	.24
17...	1455	10	.74	.07	.32	5.2	.22
MAY							
08...	1435	6.0	.84	.05	.54	.55	.55
15...	1530	2.0	.86	.05	.34	.90	.65
JUNE							
06...	1530	2.5	1.2	.11	.46	1.2	.93
19...	1635	3.0	1.2	.08	.38	1.1	.81
JULY							
11...	1615	1.5	1.6	.04	.41	1.7	1.1
24...	1950	1.2	1.7	.04	.30	1.6	1.0
AUG.							
15...	1820	1.0	2.0	.03	.38	1.7	1.4
28...	1655	.50	2.1	.07	.38	2.0	1.8
SEP.							
11...	1720	1.0	1.8	.14	.71	2.4	1.9
25...	1640	1.2	1.9	.13	.80	1.6	1.4

14212400 WEAVER CREEK AT BRUSH PRAIRIE, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.							
04...	210	7.5	10.7	11	10	8.8	2000
17...	255	7.3	9.9	110	8	7.8	3000
31...	250	7.5	5.8	98	9	9.6	3200
NOV.							
09...	--	7.2	10.0	114	20	7.9	5000
14...	160	7.3	7.9	11	5	9.1	1300
28...	81	7.0	7.7	4	10	10.3	8000
DEC.							
20...	39	6.9	8.0	16	20	11.3	12000
27...	58	6.8	8.4	69	7	10.6	8000
JAN.							
09...	90	6.9	2.2	39	9	13.2	<100
23...	80	7.1	6.2	47	7	12.0	300
FEB.							
06...	100	7.1	6.4	39	6	11.8	160
21...	108	7.3	9.1	47	7	11.3	1000
MAR.							
06...	87	7.4	11.3	16	7	11.5	150
20...	43	7.5	8.9	18	3	10.8	100
APR.							
03...	100	7.4	12.4	65	10	11.6	1600
17...	111	7.5	11.1	86	10	10.7	10000
MAY							
08...	130	7.6	12.6	20	6	10.1	1200
15...	130	7.2	20.1	80	2	8.3	1800
JUNE							
06...	200	7.5	17.0	94	12	7.8	6000
19...	170	7.5	18.4	93	10	7.5	2750
JULY							
11...	220	7.8	17.5	41	9	7.5	7500
24...	230	7.6	17.7	18	9	7.7	2700
AUG.							
15...	260	7.6	17.3	130	13	6.9	21000
28...	270	7.7	15.8	122	10	7.6	16000
SEP.							
11...	280	7.5	18.3	161	16	6.1	34000
25...	210	7.2	14.8	107	9	6.3	<10000

14213000 SALMON CREEK NEAR VANCOUVER, WASH.

LOCATION.--Lat 45°42'32", long 122°38'53", in SW¼SE¼ sec.26, T.3 N., R.1 E., Clark County, at U.S. Highway 99 bridge, 3.1 mi (5.0 km) north of Vancouver city limits.

DRAINAGE AREA.--80.9 mi^2 (209.6 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
OCT.							
04...	1355	--	1.5	.02	.16	.19	.16
17...	1145	--	1.6	.04	.96	.58	.25
31...	1125	21	1.4	.01	.07	.15	.09
NOV.							
14...	1125	48	1.3	.03	.41	.29	.07
28...	1105	315	1.3	.02	.26	.12	.05
DEC.							
20...	1455	750	1.3	.01	.45	.20	.06
27...	1410	1700	.85	.02	.23	.14	.03
JAN.							
09...	1530	185	.65	.01	.21	.08	.03
23...	1310	285	.96	.01	.23	.09	.03
FEB.							
06...	1340	105	2.6	.01	.07	.08	.03
21...	1410	116	1.2	.02	.23	.12	.03
MAR.							
06...	1435	163	.87	.02	.24	.15	.07
20...	1425	360	.84	.00	.17	.16	.14
APR.							
03...	1420	123	.81	.01	.12	.13	.07
17...	1415	93	.89	.02	.26	.16	.06
MAY							
08...	1400	88	.85	.01	.20	.13	.08
15...	1450	53	1.0	.02	.35	.13	.07
JUNE							
06...	1500	37	1.1	.01	.13	.14	.09
19...	1600	49	.93	.01	.22	.14	.09
JULY							
11...	1540	23	1.1	.01	.15	.19	.11
24...	1850	21	1.2	.01	.11	.13	.08
AUG.							
15...	1720	18	1.3	.01	.14	.19	.12
28...	1610	20	1.3	.01	.10	.28	.12
SEP.							
11...	1630	19	1.3	.01	.18	.18	.11
25...	1600	57	.88	.02	.24	.18	.08

14213000 SALMON CREEK NEAR VANCOUVER, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.							
04...	125	7.9	12.7	95	15	11.2	4000
17...	190	7.7	10.2	91	5	11.2	2300
31...	230	7.8	6.8	63	6	12.5	2300
NOV.							
14...	120	7.5	8.0	88	45	11.6	2500
28...	74	7.3	7.4	42	15	11.9	6000
DEC.							
20...	58	7.1	8.0	65	35	11.5	>16000
27...	52	7.0	8.1	75	25	11.3	9000
JAN.							
09...	90	7.2	2.2	38	9	13.9	1200
23...	76	7.3	5.3	61	16	12.5	1300
FEB.							
06...	180	7.3	5.7	34	8	12.7	600
21...	97	7.6	8.2	50	9	12.8	900
MAR.							
06...	94	7.6	10.5	45	9	11.6	4700
20...	48	7.6	8.5	49	8	11.8	800
APR.							
03...	92	7.7	11.7	53	6	12.2	2000
17...	99	7.6	11.2	89	10	11.6	10000
MAY							
08...	100	7.7	11.7	56	10	11.3	2000
15...	120	7.6	20.0	51	7	9.9	1500
JUNE							
06...	120	7.9	17.7	53	6	10.5	1750
19...	115	8.0	20.4	58	12	10.0	1000
JULY							
11...	140	8.2	20.5	57	5	9.8	1200
24...	150	8.0	19.2	25	4	8.1	2400
AUG.							
15...	240	8.3	19.9	48	11	9.0	3300
28...	150	8.3	18.3	47	9	9.8	3300
SEP.							
11...	150	8.2	19.6	55	7	9.3	6000
25...	107	7.6	14.9	117	20	--	370

14221700 LEWIS RIVER AT WOODLAND, WASH.

LOCATION.--Lat 45°53'25", long 122°43'55", in SE¼NW¼ sec.30, T.5 N., R.1 E., Cowlitz County, at U.S. Highway 99 bridge, 1.0 mi (1.6 km) southeast of Woodland.

DRAINAGE AREA.--828 mi^2 (2,145 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1962 to September 1970, October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)
OCT.							
04...	1530	34	7.4	14.9	20	4	10.0
17...	1330	33	7.4	14.6	10	2	9.8
31...	1345	37	7.5	12.7	6	2	10.1
NOV.							
14...	1310	55	7.4	12.0	11	2	10.7
28...	1310	34	7.2	9.7	6	2	11.0
DEC.							
20...	1630	35	7.2	7.4	142	4	12.3
27...	1630	38	7.0	6.6	21	5	12.1
JAN.							
09...	0840	45	7.1	2.1	13	5	12.7
23...	0800	43	7.1	4.4	13	3	12.8
FEB.							
06...	0805	41	7.1	3.4	11	4	12.9
21...	0840	48	6.9	5.2	14	3	13.6
MAR.							
06...	0805	41	7.4	4.9	10	2	12.6
20...	0800	86	7.7	5.1	19	6	12.6
APR.							
03...	0800	38	7.2	5.1	12	5	13.0
17...	0825	38	7.4	6.4	13	2	12.5
MAY							
08...	0850	56	7.3	8.0	16	2	12.1
15...	0835	42	7.0	12.0	15	2	11.8
JUNE							
06...	0805	39	7.1	12.1	17	2	11.8
19...	1030	49	7.4	11.4	11	2	11.3
JULY							
11...	0935	42	7.4	10.5	34	2	10.6
24...	1100	45	7.3	13.6	10	1	10.0
AUG.							
14...	1040	50	7.4	14.7	13	1	10.8
28...	0950	46	7.4	13.2	12	1	10.1
SEP.							
11...	1015	42	7.3	15.5	11	1	9.4
25...	1000	47	7.1	13.4	16	2	9.7

14221700 LEWIS RIVER AT WOODLAND, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	IMMEDIATE COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
OCT.						
04...	100	0	0	4	.1	7
17...	500	0	10	7	8.0	30
31...	1400	0	4	1	.1	0
NOV.						
14...	350	0	4	1	.1	10
28...	140	0	2	1	.2	10
DEC.						
20...	600	0	2	1	3.4	20
27...	10000	0	1	1	.0	10
JAN.						
09...	130	0	3	2	2.3	20
23...	100	0	2	6	.3	10
FEB.						
06...	60	0	5	1	.1	0
21...	60	0	4	2	.1	0
MAR.						
06...	60	0	0	4	.0	110
20...	100	0	2	2	.2	20
APR.						
03...	40	0	8	0	.0	0
17...	160	0	5	3	.1	20
MAY						
08...	500	0	6	4	.0	20
15...	80	0	3	1	.0	0
JUNE						
06...	180	0	6	2	.3	60
19...	130	0	8	13	.3	10
JULY						
11...	200	0	4	2	.0	20
24...	320	0	10	3	.0	0
AUG.						
14...	--	0	1	6	.0	550
28...	1000	0	1	2	.0	0
SEP.						
11...	670	0	3	5	.0	40
25...	6800	0	0	3	.0	90

14222986 KALAMA RIVER BELOW SUMMERS CREEK, NEAR ARIEL, WASH.

LOCATION.--Lat 46°02'03", long 122°39'16", in SW¼NW¼ sec.2, T.6 N., R.1 E., Cowlitz County, at road bridge 400 ft (122 m) downstream from Summers Creek, 6.7 mi (10.8 km) northwest of Ariel, and at mile 16.7 (26.9 km).

DRAINAGE AREA.--155 mi^2 (401 km^2), approximately.

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
OCT.							
04...	1635	315	.07	.00	.02	.01	.01
17...	1445	250	.04	.00	.12	.01	.00
31...	1545	252	.03	.00	.01	.01	.01
NOV.							
14...	1430	--	.12	.00	.03	.01	.00
DEC.							
28...	0935	4200	.33	.00	.06	.05	.00
JAN.							
10...	1010	780	.19	.00	.09	.03	.00
23...	1535	1200	.18	.01	.03	.00	.00
FEB.							
07...	0835	705	.52	.00	.07	.01	.00
22...	0940	595	.23	.00	.06	.01	.00
MAR.							
07...	0845	1000	.15	.01	.05	.00	.00
21...	0900	1120	.15	.00	.03	.01	.01
APR.							
04...	0845	675	.09	.01	.06	.02	.00
18...	0905	960	.09	.00	.07	.02	.01
MAY							
09...	0945	680	.10	.00	.07	.02	.01
16...	0915	510	.05	.00	.06	.01	.00
JUNE							
07...	0900	352	.04	.00	.05	.01	.00
19...	0930	510	.05	.00	.11	.01	.00
JULY							
11...	0845	342	.03	.00	.13	.01	.01
24...	0955	265	.03	.00	.05	.01	.00
AUG.							
14...	0940	235	.04	.00	.10	.01	.00
28...	0850	228	.03	.00	.04	.01	.00
SEP.							
11...	0915	208	.03	.00	.08	.01	.01
25...	0910	1040	.16	.01	.04	.01	.00

14222986 KALAMA RIVER BELOW SUMMERS CREEK, NEAR ARIEL, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.							
04...	44	7.4	8.6	37	3	--	300
17...	56	7.5	9.5	10	2	11.8	250
31...	55	7.6	6.0	65	2	12.6	110
NOV.							
14...	51	7.6	7.0	44	3	12.3	400
DEC.							
28...	35	7.1	5.9	26	15	12.7	>4000
JAN.							
10...	72	8.2	2.4	29	7	13.7	<100
23...	42	7.3	5.6	13	5	12.7	76
FEB.							
07...	46	7.2	3.4	6	3	13.5	40
22...	47	7.4	5.1	36	3	12.9	50
MAR.							
07...	42	7.5	6.2	40	2	12.5	50
21...	46	7.4	6.1	8	2	12.8	68
APR.							
04...	48	7.5	6.1	12	2	12.5	70
18...	42	7.5	5.4	20	5	12.6	140
MAY							
09...	49	7.3	8.1	50	3	12.2	200
16...	46	7.4	11.5	15	2	11.1	430
JUNE							
07...	57	7.6	10.5	13	2	11.3	650
19...	49	7.6	11.0	11	2	11.4	350
JULY							
11...	56	7.6	12.5	110	1	10.7	400
24...	57	7.7	12.6	20	2	10.6	210
AUG.							
14...	64	7.6	14.6	17	1	10.3	700
28...	63	7.7	10.4	9	1	10.8	275
SEP.							
11...	61	7.6	12.7	6	1	10.2	>800
25...	37	7.2	10.1	20	3	11.3	820

14223000 KALAMA RIVER NEAR KALAMA, WASH.

LOCATION.--Lat 46°01'02", long 122°43'52", in NE¼SW¼ sec.7, T.6 N., R.1 E., Cowlitz County, 0.4 mi (0.6 km) upstream from lower Kalama Falls, 0.5 mi (0.8 km) upstream from former gaging station, 5.4 mi (8.7 km) east of Kalama, and at mile 10.8 (17.4 km).

DRAINAGE AREA.--178 mi² (461 km²).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)
OCT.							
04...	1615	315	.07	.00	.10	.01	.00
17...	1425	250	.07	.00	.04	.01	.00
31...	1520	250	.05	.00	.01	.01	.00
NOV.							
14...	1405	800	.14	.00	.03	.01	.00
28...	1445	--	.22	.00	.08	.06	.00
DEC.							
21...	0905	8700	.57	.01	.20	.50	.00
28...	0900	4300	.33	.00	.06	.05	.00
JAN.							
10...	0920	800	.24	.00	.06	.03	.00
23...	1505	1250	.23	.00	.02	.00	.00
FEB.							
07...	0810	750	.17	.00	.03	.01	.03
22...	0920	655	.23	.00	.06	.01	.00
MAR.							
07...	0830	1050	.17	.00	.04	.00	.00
21...	0840	1200	.20	.00	.03	.02	.01
APR.							
04...	0815	680	.12	.01	.06	.02	.01
18...	0830	1050	.14	.00	.05	.02	.01
MAY							
09...	0900	685	.17	.01	.13	.02	.01
16...	0840	540	.09	.00	.05	.02	.01
JUNE							
07...	0820	410	.05	.00	.02	.01	.01
19...	0845	515	.05	.00	.09	.01	.00
JULY							
11...	0815	355	.03	.00	.12	.01	.01
24...	0850	275	.03	.00	.06	.01	.00
AUG.							
14...	0835	235	.02	.00	.03	.01	.00
28...	0820	230	.03	.00	.03	.01	.00
SEP.							
11...	0840	215	.02	.01	.07	.02	.00
25...	0840	1140	.20	.00	.04	.01	.00

14223000 KALAMA RIVER NEAR KALAMA, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.							
04...	51	7.4	10.4	22	2	--	270
17...	61	7.2	9.5	11	2	11.8	90
31...	57	7.6	6.0	8	2	12.7	200
NOV.							
14...	110	7.1	6.8	12	2	12.4	200
28...	37	7.1	6.7	8	25	12.5	450
DEC.							
21...	24	7.1	8.0	130	100	12.0	2750
28...	30	7.1	6.2	28	15	12.8	<1000
JAN.							
10...	59	7.1	2.7	14	5	13.7	100
23...	42	7.3	5.5	12	3	13.0	<100
FEB.							
07...	49	7.2	3.3	8	2	13.3	40
22...	51	7.4	5.1	11	2	13.0	60
MAR.							
07...	44	7.5	6.5	12	2	12.1	70
21...	49	7.4	5.9	12	3	12.4	54
APR.							
04...	50	--	7.2	13	2	12.3	100
18...	43	7.4	5.8	18	4	12.4	250
MAY							
09...	56	7.3	8.6	17	3	12.1	200
16...	47	7.5	13.0	16	2	10.6	240
JUNE							
07...	57	7.5	11.5	13	2	10.9	100
19...	53	7.5	12.4	12	3	11.0	300
JULY							
11...	61	7.6	12.8	4	1	11.4	550
24...	64	7.6	12.2	5	1	10.7	270
AUG.							
14...	70	7.5	14.3	11	1	10.2	1000
28...	66	7.6	10.4	7	1	10.5	600
SEP.							
11...	67	7.5	12.8	8	1	10.0	720
25...	41	7.2	10.4	27	4	11.0	880

14223510 KALAMA RIVER BELOW CEDAR CREEK, NEAR KALAMA, WASH.

LOCATION.--Lat 46°02'52", long 122°50'11", in SE¼NW¼ sec.32, T.7 N., R.1 W., Cowlitz County, at Modrow Road bridge, 1.1 mi (1.8 km) downstream from Cedar Creek, 1.4 mi (2.3 km) downstream from "below Italian Creek" gaging station, 2.5 mi (4.0 km) north of Kalama, and at mile 2.8 (4.5 km).

DRAINAGE AREA.--200 mi^2 (518 km^2), approximately.

PERIOD OF RECORD.--Chemical analyses: July 1960 to September 1970, October 1972 to September 1973 (discontinued). Record prior to October 1972, collected at site 1.6 mi (2.6 km) downstream and published as 14223500, "below Italian Creek".
Water temperatures: October 1954 to September 1972. Record collected at gaging station, 1.4 mi (2.3 km) upstream.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITROGEN (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED ORTHO. PHOSPHORUS (P) (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)
OCT.											
04...	1555	318	.07	.00	.04	.30	.34	.01	.00	46	7.6
17...	1400	255	.03	.00	.01	.00	.01	.01	.01	56	7.5
31...	1420	250	.04	.00	.02	.01	.03	.08	.00	59	7.7
NOV.											
14...	1340	828	.16	.00	.03	.00	.03	.01	.00	43	7.3
28...	1335	1370	.30	.00	.05	.01	.06	.00	.00	35	7.2
DEC.											
21...	0835	8110	.61	.03	.30	.02	.32	.10	.01	27	7.1
28...	0835	4700	.44	.00	.06	.01	.07	.05	.00	32	7.1
JAN.											
10...	0835	825	.35	.00	.02	.01	.03	.02	.01	48	6.9
23...	1435	1320	.32	.01	.02	.02	.04	.01	.01	44	7.3
FEB.											
07...	0740	781	.27	.00	.03	.03	.06	.01	.00	49	7.2
22...	0900	680	.16	.00	.04	.16	.20	.02	.00	50	7.7
MAR.											
07...	0800	1110	.25	.01	.04	.10	.14	.01	.00	46	7.4
21...	0805	1270	.33	.00	.03	.14	.17	.03	.01	48	7.4
APR.											
04...	0755	716	.13	.01	.06	.08	.14	.02	.01	53	7.5
18...	0800	1100	.13	.00	.05	.05	.10	.01	.01	42	7.6
MAY											
09...	0845	673	.12	.00	.09	.06	.15	.04	.02	49	7.5
16...	0800	592	.06	.00	.06	.01	.07	.01	.01	47	7.6
JUNE											
07...	0750	430	.05	.00	.03	.04	.07	.01	.01	63	7.6
19...	0815	508	.07	.00	.10	.00	.10	.02	.00	54	7.5
JULY											
11...	0740	350	.05	.00	.09	.00	.09	.01	.01	64	7.6
24...	0755	290	.03	.00	.03	.05	.08	.01	.01	71	7.7
AUG.											
14...	0755	244	.03	.00	.03	.09	.12	.02	.00	75	7.5
28...	0740	230	.03	.00	.02	.23	.25	.01	.01	74	7.6
SEP.											
11...	0800	219	.03	.00	.08	.05	.13	.01	.01	73	7.6
25...	0805	1190	.27	.00	.05	.20	.25	.03	.00	44	7.3

14223510 KALAMA RIVER BELOW CEDAR CREEK, NEAR KALAMA, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	DISSOLVED CHROMIUM (CR) (UG/L)	DISSOLVED COPPER (CU) (UG/L)	DISSOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DISSOLVED ZINC (ZN) (UG/L)
OCT.										
04...	10.6	17	2	11.8	220	0	0	2	.0	7
17...	9.5	8	2	11.7	130	0	6	6	6.0	10
31...	5.7	11	2	13.0	220	0	7	2	.2	70
NOV.										
14...	7.3	12	2	12.3	200	0	5	1	.1	10
28...	6.7	10	3	12.8	210	0	2	0	.2	10
DEC.										
21...	8.2	79	100	11.9	2750	0	10	2	1.2	30
28...	6.1	35	20	12.6	300	0	3	1	.1	20
JAN.										
10...	2.8	11	3	13.6	100	0	2	2	2.3	20
23...	5.5	14	4	13.0	<100	0	2	8	.2	30
FEB.										
07...	3.3	8	3	13.3	70	0	4	1	.0	10
22...	5.2	9	2	12.8	80	0	3	2	.0	20
MAR.										
07...	6.9	13	2	12.2	100	0	0	4	.0	190
21...	5.9	18	2	12.3	100	0	1	1	.0	10
APR.										
04...	7.2	14	2	11.8	120	0	3	1	.1	10
18...	6.4	17	3	12.3	140	0	3	5	.0	180
MAY										
09...	9.1	18	3	12.2	220	0	8	4	.0	80
16...	12.2	17	2	10.5	200	0	9	2	.2	20
JUNE										
07...	11.9	17	1	10.6	650	0	5	6	.2	0
19...	11.5	13	2	11.0	800	0	9	4	.0	20
JULY										
11...	13.4	42	1	10.1	200	0	2	1	.0	0
24...	12.5	13	2	9.8	<100	0	5	6	.0	0
AUG.										
14...	16.0	14	1	9.7	600	0	3	0	.0	40
28...	11.9	9	1	10.0	800	0	1	2	.0	0
SEP.										
11...	14.1	8	1	9.3	710	0	5	4	.1	60
25...	10.8	32	7	10.9	1100	0	1	4	.0	60

14233400 COWLITZ RIVER NEAR RANDLE, WASH.

LOCATION.--Lat 46°28'13", long 122°05'51", in NE¼ sec.6, T.11 N., R.6 E., Lewis County, temperature recorder at gaging station 0.5 mi (0.8 km) downstream from Cispus River, 8.1 mi (13.0 km) southwest of Randle, and at mile 89.3 (143.7 km).

DRAINAGE AREA.--1,030 mi² (2,668 km²).

PERIOD OF RECORD.--Chemical analyses: July 1959 to September 1970.
Water temperatures: November 1952 to August 1968, April 1969 to September 1973.

EXTREMES.--1972-73:
Water temperatures: Maximum, 16.0°C July 30, Sept. 11; minimum, freezing point Dec. 9, 10.

Period of record:
Water temperatures: Maximum, 18.5°C July 11, 12, 1958; minimum (1952-68, 1969-73), freezing point Jan. 20, 1962, Dec. 9, 10, 1972.

REMARKS.--Prior to October 1968 data collected at site 1.0 mi (1.6 km) downstream and published as "near Kosmos." Recorder not operating Oct. 21-26, Nov. 20-23, and Dec. 15 to Jan. 14; range in temperature 6.5°C to 9.0°C, 4.0°C to 4.5°C, and 2.0°C to 4.5°C, respectively.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	10.0	9.0	5.5	5.0	5.0	4.0	---	---	4.0	4.0	5.0	4.5
2	10.5	9.5	5.5	5.0	5.0	4.0	---	---	4.0	4.0	5.0	4.5
3	10.5	8.5	5.5	5.5	4.0	2.0	---	---	4.0	4.0	4.5	4.5
4	10.0	8.0	5.5	5.0	2.0	0.5	---	---	4.0	4.0	4.5	4.5
5	9.0	7.0	5.0	4.5	1.0	0.5	---	---	4.0	4.0	5.0	4.5
6	9.0	8.0	4.5	4.5	0.5	0.5	---	---	4.0	4.0	5.0	4.5
7	9.5	8.5	5.0	4.5	0.5	0.5	---	---	4.0	4.0	5.0	4.5
8	10.0	9.0	5.5	5.0	0.5	0.5	---	---	4.0	4.0	5.0	5.0
9	9.5	8.0	5.0	5.0	0.5	0.0	---	---	4.0	4.0	6.0	5.0
10	8.5	6.5	5.0	4.5	1.5	0.0	---	---	4.0	4.0	6.0	6.0
11	8.0	7.0	5.0	4.5	2.0	1.0	---	---	4.0	4.0	6.0	5.0
12	9.0	8.0	4.5	4.5	2.0	2.0	---	---	4.0	4.0	5.5	5.0
13	10.0	8.5	5.0	4.5	2.0	1.0	---	---	4.0	4.0	5.0	5.0
14	10.0	9.0	4.5	4.0	2.0	1.0	---	---	4.0	4.0	5.0	5.0
15	9.5	8.0	5.0	4.0	---	---	4.5	4.5	4.0	4.0	5.0	5.0
16	8.5	8.0	5.0	4.5	---	---	4.5	4.5	4.0	4.0	5.5	5.0
17	9.0	8.0	5.0	4.5	---	---	4.5	4.5	4.0	4.0	5.5	5.0
18	8.5	8.0	5.0	4.5	---	---	4.5	4.0	4.5	4.0	5.0	5.0
19	8.5	8.0	4.5	4.0	---	---	4.0	3.5	5.0	5.0	5.0	5.0
20	8.5	8.0	---	---	---	---	4.0	3.5	5.0	5.0	5.0	5.0
21	---	---	---	---	---	---	4.0	3.5	5.0	4.5	5.5	5.0
22	---	---	---	---	---	---	3.5	2.0	4.5	4.5	5.5	5.5
23	---	---	---	---	---	---	3.5	2.0	4.5	4.5	5.5	5.5
24	---	---	5.5	5.0	---	---	4.0	3.5	5.0	4.5	6.0	5.5
25	---	---	5.5	5.5	---	---	4.0	3.5	5.0	5.0	6.0	6.0
26	---	---	5.5	4.0	---	---	3.5	2.0	5.0	5.0	6.0	6.0
27	6.0	6.0	4.0	3.5	---	---	3.0	3.0	5.0	4.5	6.0	6.0
28	6.0	5.5	3.5	3.0	---	---	3.0	3.0	5.0	4.5	6.5	6.0
29	5.5	5.0	4.5	3.5	---	---	3.5	3.0	---	---	6.5	6.5
30	5.0	5.0	4.5	4.5	---	---	4.0	3.5	---	---	6.5	6.5
31	5.0	4.5	---	---	---	---	4.0	4.0	---	---	6.5	6.5
MONTH	10.5	4.5	5.5	3.0	---	---	---	---	5.0	4.0	6.5	4.5

14233400 COWLITZ RIVER NEAR RANDLE, WASH.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	6.5	6.5	8.0	7.0	10.0	9.5	11.0	10.5	15.0	15.0	14.5	14.0
2	6.5	6.5	8.0	8.0	9.5	9.0	11.0	11.0	15.0	15.0	14.5	14.0
3	6.5	6.5	8.0	8.0	9.5	9.5	12.0	11.0	15.0	15.0	15.0	14.5
4	6.5	6.5	8.0	8.0	10.0	9.5	12.0	11.5	15.0	15.0	15.0	15.0
5	6.5	6.5	8.0	8.0	11.0	10.0	12.0	12.0	15.0	14.5	15.0	15.0
6	6.5	6.5	8.0	8.0	11.0	10.5	12.0	11.5	14.5	14.0	15.0	13.5
7	6.5	6.5	8.5	8.0	10.5	10.0	11.5	11.5	14.5	14.5	13.5	12.0
8	6.5	6.5	8.0	7.0	10.0	10.0	12.0	11.5	14.5	14.5	13.0	11.5
9	7.0	6.5	7.0	7.0	10.0	9.5	13.0	12.0	14.5	14.5	14.0	12.0
10	7.0	7.0	7.0	7.0	10.0	9.5	13.0	12.0	14.5	14.5	15.5	13.5
11	8.0	7.0	8.0	7.0	10.0	10.0	13.0	13.0	14.5	14.0	16.0	14.5
12	8.0	8.0	8.5	8.0	10.0	10.0	13.5	13.0	14.0	14.0	15.0	13.5
13	8.0	8.0	9.5	8.5	10.5	10.0	13.5	13.5	14.5	14.0	13.5	12.0
14	8.0	7.0	9.5	9.5	10.5	10.0	14.0	13.5	14.5	14.5	13.0	12.0
15	7.0	7.0	9.5	9.5	10.0	10.0	14.0	14.0	14.5	14.5	13.0	11.5
16	7.0	6.5	9.5	9.0	10.0	10.0	14.0	14.0	14.5	14.5	13.0	11.5
17	6.5	6.5	9.5	9.0	10.0	9.5	14.5	14.0	14.5	14.0	12.0	12.0
18	6.5	6.0	9.5	9.0	9.5	9.0	14.5	14.5	14.0	14.0	12.0	12.0
19	6.5	6.0	9.5	8.5	10.0	9.5	14.5	14.5	14.5	14.0	12.0	11.5
20	6.5	6.0	8.5	8.0	11.0	10.0	14.5	14.5	14.5	14.5	11.5	11.0
21	6.5	6.5	8.5	7.0	11.5	11.0	14.5	14.0	14.5	14.5	11.5	10.5
22	8.0	6.5	8.5	8.5	12.0	11.5	14.0	13.5	14.5	14.5	11.0	10.5
23	8.0	8.0	8.5	8.5	12.0	11.5	13.5	13.5	14.5	14.5	11.0	10.5
24	8.0	7.0	8.5	8.0	11.5	11.0	13.5	13.5	14.5	14.0	12.0	10.5
25	8.0	7.0	8.0	7.0	11.0	10.5	13.5	13.5	14.0	14.0	12.0	11.0
26	8.0	8.0	8.0	7.0	11.0	10.5	14.0	13.5	14.5	14.0	12.0	10.5
27	8.0	7.0	8.0	7.0	12.0	11.0	14.0	14.0	14.5	14.5	12.0	10.5
28	7.0	6.5	9.5	7.0	12.0	12.0	14.0	14.0	14.5	14.5	13.0	11.5
29	7.0	6.5	10.0	9.5	12.0	11.5	14.5	14.0	14.5	14.5	13.0	12.0
30	7.0	6.5	10.5	10.0	11.5	11.0	16.0	14.0	14.5	14.5	12.0	12.0
31	---	---	10.5	10.0	---	---	15.0	15.0	14.5	14.5	---	---
MONTH	8.0	6.0	10.5	7.0	12.0	9.0	16.0	10.5	15.0	14.0	16.0	10.5

14234810 COWLITZ RIVER BELOW MOSSYROCK DAM, WASH.

LOCATION.--Lat 46°32'10", long 122°25'45", in SE¼SE¼ sec.9, T.12 N., R.3 E., Lewis County, temperature recorder on left bank 0.2 mi (0.3 km) downstream from Mossyrock Dam and 2.6 mi (4.2 km) east from town of Mossyrock.

DRAINAGE AREA.--1,154 mi² (2,989 km²) at Mossyrock Dam.

PERIOD OF RECORD.--Water temperatures: July 1970 to September 1973.

EXTREMES.--1972-73:
Water temperatures: Maximum, 10.5°C Oct. 5-7, 9-20, 24, Oct. 26 to Nov. 4, Nov. 6-17; minimum, 4.5°C on many days between Jan. 28 and Mar. 27.

Period of record:
Water temperatures: Maximum, 12.0°C Nov. 3, 4, 1970; minimum, 3.5°C Feb. 9, 10, 25, 1972.

REMARKS.--Temperature recorder not operating June 4-5, 6-7, 22-26 and Sept. 25-30 (no temperature range obtained.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	10.0	10.0	10.5	10.5	9.5	9.0	6.0	6.0	5.0	4.5	4.5	4.5
2	10.0	10.0	10.5	10.0	9.0	9.0	6.0	6.0	5.0	4.5	4.5	4.5
3	10.0	10.0	10.5	10.0	9.5	9.0	6.0	6.0	5.0	4.5	4.5	4.5
4	10.0	10.0	10.5	10.0	9.5	9.5	6.5	6.0	5.0	4.5	4.5	4.5
5	10.5	10.0	10.0	10.0	9.5	9.5	6.0	6.0	5.0	4.5	4.5	4.5
6	10.5	10.0	10.5	10.0	9.5	9.0	6.5	6.0	4.5	4.5	4.5	4.5
7	10.5	10.0	10.5	10.0	9.5	9.0	6.0	6.0	4.5	4.5	4.5	4.5
8	10.0	10.0	10.5	10.0	9.5	9.0	6.5	6.0	4.5	4.5	4.5	4.5
9	10.5	10.0	10.5	10.5	9.5	8.5	6.0	5.5	4.5	4.5	4.5	4.5
10	10.5	10.0	10.5	10.5	9.0	8.5	5.5	5.5	4.5	4.5	4.5	4.5
11	10.5	10.0	10.5	10.0	9.0	8.5	5.5	5.5	4.5	4.5	4.5	4.5
12	10.5	10.0	10.5	10.5	8.5	8.5	5.5	5.0	4.5	4.5	4.5	4.5
13	10.5	10.0	10.5	10.5	8.5	8.0	5.5	5.0	4.5	4.5	4.5	4.5
14	10.5	10.0	10.5	10.5	8.0	7.0	5.5	5.0	4.5	4.5	4.5	4.5
15	10.5	10.0	10.5	10.0	8.0	7.0	5.5	5.5	4.5	4.5	4.5	4.5
16	10.5	10.0	10.5	10.0	7.0	7.0	5.5	5.5	4.5	4.5	5.0	4.5
17	10.5	10.5	10.5	10.0	7.0	7.0	5.5	5.5	4.5	4.5	5.0	4.5
18	10.5	10.5	10.0	10.0	7.0	7.0	5.5	5.0	4.5	4.5	5.0	4.5
19	10.5	10.5	10.0	9.5	7.0	6.5	5.5	5.5	4.5	4.5	5.0	5.0
20	10.5	10.0	10.0	9.5	6.5	6.5	5.5	5.0	4.5	4.5	5.0	4.5
21	10.0	10.0	10.0	10.0	6.5	6.5	5.5	5.0	4.5	4.5	5.0	4.5
22	10.0	10.0	10.0	10.0	6.5	6.0	5.5	5.0	4.5	4.5	5.0	4.5
23	10.0	10.0	10.0	10.0	6.0	6.0	5.0	5.0	4.5	4.5	5.0	4.5
24	10.5	10.0	10.0	9.5	6.0	5.5	5.0	5.0	4.5	4.5	5.0	5.0
25	10.0	10.0	10.0	9.5	6.0	5.5	5.5	5.0	4.5	4.5	5.0	4.5
26	10.5	10.0	10.0	9.5	6.5	5.5	5.5	5.0	4.5	4.5	5.0	4.5
27	10.5	10.5	10.0	9.5	6.5	5.5	5.0	5.0	4.5	4.5	5.0	4.5
28	10.5	10.5	10.0	9.5	6.0	6.0	5.0	4.5	4.5	4.5	5.5	5.0
29	10.5	10.0	9.5	9.5	6.0	6.0	5.0	4.5	---	---	5.5	5.0
30	10.5	10.5	9.5	9.5	6.5	6.0	5.0	5.0	---	---	5.5	5.5
31	10.5	10.5	---	---	6.0	6.0	5.0	4.5	---	---	5.5	5.5
MONTH	10.5	10.0	10.5	9.5	9.5	5.5	6.5	4.5	5.0	4.5	5.5	4.5

14234810 COWLITZ RIVER BELOW MOSSYROCK DAM, WASH.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	5.5	5.0	6.0	5.5	7.0	6.0	7.0	6.5	8.0	7.0	9.0	8.5
2	5.5	5.0	6.0	6.0	6.5	6.0	7.0	6.5	8.0	7.0	9.0	5.5
3	5.5	5.0	6.5	6.0	6.5	6.5	7.0	6.5	8.0	7.0	9.0	8.5
4	5.5	5.5	6.5	6.0	---	---	7.0	6.5	8.0	5.5	9.0	9.0
5	5.5	5.5	6.0	5.5	---	---	7.0	6.5	5.5	5.5	9.0	9.0
6	5.5	5.0	6.0	6.0	---	6.5	7.0	6.5	8.0	5.5	9.0	9.0
7	6.0	5.5	6.0	6.0	---	6.5	6.5	6.5	8.0	5.5	9.0	9.0
8	6.0	5.5	6.0	6.0	7.0	6.5	6.5	6.5	8.0	5.5	9.0	9.0
9	6.0	5.5	6.0	5.5	7.0	6.0	7.0	6.5	8.0	5.5	9.5	9.0
10	5.5	5.5	6.0	5.5	6.5	6.0	7.0	6.5	8.0	5.5	9.5	9.0
11	6.0	5.5	6.0	6.0	6.5	6.0	7.0	6.5	8.0	8.0	9.0	9.0
12	6.0	5.5	6.0	6.0	6.5	6.0	7.0	6.5	8.0	8.0	9.5	9.0
13	5.5	5.5	6.5	6.0	6.5	6.0	6.5	6.5	8.5	8.0	9.0	9.0
14	5.5	5.5	6.5	6.0	6.5	6.0	7.0	6.5	8.5	8.0	9.0	9.0
15	5.5	5.5	6.5	6.0	6.5	6.0	7.0	6.5	8.5	8.0	9.5	9.0
16	5.5	5.5	7.0	6.0	6.5	6.0	7.0	6.5	8.5	5.5	9.5	9.0
17	5.5	5.5	6.0	6.0	6.5	6.0	7.0	6.5	8.5	5.5	9.5	9.0
18	5.5	5.5	6.5	6.0	6.5	6.0	7.0	6.5	8.5	5.5	9.5	9.0
19	5.5	5.5	6.5	6.0	6.5	6.0	7.0	6.5	8.5	5.5	9.5	9.0
20	5.5	5.5	7.0	6.0	7.0	6.0	7.0	6.5	8.5	7.0	9.5	9.0
21	6.0	5.5	6.0	6.0	7.0	6.0	7.0	6.5	8.5	5.5	9.5	9.0
22	6.0	5.5	6.0	6.0	---	6.0	7.0	6.5	9.0	5.5	9.5	9.0
23	6.0	5.5	6.5	6.0	---	---	7.0	6.5	8.5	8.5	10.0	9.0
24	6.0	5.5	6.5	6.0	6.5	---	7.0	6.5	9.0	5.5	10.0	9.5
25	6.5	6.0	7.0	6.0	---	---	7.0	6.5	8.5	5.5	9.5	9.5
26	6.0	5.5	6.5	6.0	7.0	---	7.0	6.5	9.0	8.5	---	---
27	6.5	6.0	6.5	6.0	7.0	6.5	7.0	7.0	8.5	8.5	---	---
28	6.5	5.5	6.5	6.0	7.0	6.5	7.0	7.0	8.5	8.5	---	---
29	7.0	6.0	7.0	6.0	7.0	6.5	7.0	7.0	9.0	8.5	---	---
30	8.0	6.0	7.0	6.5	7.0	6.5	8.0	7.0	9.5	9.0	---	---
31	---	---	6.5	5.5	---	---	7.0	7.0	9.5	8.5	---	---
MONTH	8.0	5.0	7.0	5.5	---	6.0	8.0	6.5	9.5	5.5	10.0	5.5

14236200 TILTON RIVER ABOVE BEAR CANYON CREEK, NEAR CINEBAR, WASH.

LOCATION.--Lat 46°35'44", long 122°27'30", in NE¼SW¼ sec.20, T.13 N., R.3 E., Lewis County, temperature recorder at gaging station on right bank, 0.9 mi (1.4 km) upstream from Bear Canyon Creek, 3.5 mi (5.6 km) southeast of Cinebar, and at mile 7.1 (11.4 km).

DRAINAGE AREA.--141 mi^2 (365 km^2).

PERIOD OF RECORD.--Water temperatures: May 1965 to September 1973.

EXTREMES.--1972-73:
Water temperatures: Maximum, 22.0°C July 28, Aug. 13; minimum recorded, 3.0°C Nov. 7-9.

Period of record:
Water temperatures: Maximum, 24.5°C July 30, 1965; minimum, 0.5°C Feb. 2, 1972.

REMARKS.--Temperature recorder not operating Oct. 1-19, Nov. 10 to Dec. 22 and Jan. 5 to Feb. 2 (no range in temperature obtained).

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	6.5	6.5	---	---	6.0	5.5	---	---	5.5	5.0
2	---	---	6.5	6.5	---	---	6.0	5.5	---	---	5.5	5.0
3	---	---	7.0	6.5	---	---	5.5	5.5	5.0	4.5	5.5	4.5
4	---	---	7.0	7.0	---	---	5.5	5.5	4.5	4.0	5.5	5.0
5	---	---	7.0	7.0	---	---	---	---	4.5	4.0	5.5	5.0
6	---	---	---	---	---	---	---	---	4.5	4.0	6.0	5.0
7	---	---	3.5	3.0	---	---	---	---	4.5	4.0	6.0	5.5
8	---	---	3.0	3.0	---	---	---	---	5.5	4.5	6.5	5.0
9	---	---	3.0	3.0	---	---	---	---	6.0	5.0	6.0	5.5
10	---	---	---	---	---	---	---	---	5.0	4.5	6.0	5.0
11	---	---	---	---	---	---	---	---	5.0	4.5	5.5	5.0
12	---	---	---	---	---	---	---	---	5.5	4.5	5.0	4.5
13	---	---	---	---	---	---	---	---	5.0	4.5	5.0	4.5
14	---	---	---	---	---	---	---	---	5.0	4.5	5.0	4.5
15	---	---	---	---	---	---	---	---	5.5	5.0	6.5	5.0
16	---	---	---	---	---	---	---	---	5.5	5.5	5.5	4.5
17	---	---	---	---	---	---	---	---	5.5	5.5	5.0	4.5
18	---	---	---	---	---	---	---	---	5.5	5.0	5.0	4.5
19	---	---	---	---	---	---	---	---	5.0	4.5	5.0	4.0
20	8.0	8.0	---	---	---	---	---	---	5.0	4.5	5.5	5.0
21	8.5	8.0	---	---	---	---	---	---	5.5	4.5	6.0	5.0
22	9.0	8.5	---	---	6.0	6.0	---	---	5.5	4.5	6.0	5.0
23	9.0	8.0	---	---	6.5	6.0	---	---	6.0	4.5	7.0	5.0
24	9.0	6.5	---	---	6.5	6.5	---	---	6.0	5.5	7.0	5.0
25	8.0	6.5	---	---	6.5	6.5	---	---	6.0	5.5	7.0	6.0
26	8.0	7.0	---	---	6.5	6.5	---	---	5.5	5.5	6.5	5.5
27	8.0	7.0	---	---	6.5	6.5	---	---	5.5	5.5	6.5	5.5
28	7.0	6.0	---	---	6.5	6.5	---	---	5.5	5.0	7.0	5.5
29	6.5	6.5	---	---	6.5	6.0	---	---	---	---	6.0	5.0
30	6.5	6.0	---	---	6.0	6.0	---	---	---	---	6.5	5.5
31	6.5	6.0	---	---	6.0	6.0	---	---	---	---	6.5	6.0
NTH	---	---	---	---	---	---	---	---	6.0	4.0	7.0	4.0

COWLITZ RIVER BASIN

14236200 TILTON RIVER ABOVE BEAR CANYON CREEK, NEAR CINEBAR, WASH.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.0	6.0	10.0	6.5	11.5	10.0	14.5	10.5	21.0	14.0	17.0	9.5
2	9.0	6.0	9.5	8.0	13.0	10.0	14.5	11.5	21.5	14.0	18.0	11.0
3	8.5	5.5	10.0	8.0	14.0	10.0	16.0	11.5	21.0	13.5	18.5	11.5
4	9.5	6.5	9.0	8.0	15.0	10.5	15.0	13.0	19.0	14.0	19.5	12.0
5	8.5	6.5	9.0	8.0	15.5	11.0	14.0	13.0	16.0	14.0	19.5	13.0
6	8.5	6.0	8.0	8.0	14.5	12.0	13.0	11.5	17.0	13.5	15.5	13.5
7	8.5	5.5	8.0	7.0	12.0	11.0	15.0	11.5	20.5	14.0	15.5	12.0
8	8.5	6.0	8.0	7.0	12.0	11.5	15.5	13.5	21.0	14.0	18.0	11.5
9	9.0	7.0	8.0	7.0	13.5	11.0	18.0	13.5	21.0	14.5	19.0	12.0
10	10.0	7.0	9.0	7.0	14.5	10.0	16.0	14.5	18.0	14.0	20.5	13.0
11	10.5	7.0	10.5	6.5	15.5	11.0	17.0	13.0	20.5	13.0	19.0	14.0
12	10.0	7.0	11.0	8.0	14.5	12.0	18.0	13.5	21.5	13.5	18.0	13.5
13	10.5	8.5	13.0	9.0	13.5	11.0	19.0	14.0	22.0	15.5	17.0	11.0
14	9.5	8.0	14.0	10.5	13.0	11.0	20.0	14.5	20.5	14.0	15.0	12.0
15	8.5	7.0	13.0	10.5	11.5	11.0	20.0	14.5	16.0	13.5	17.0	10.5
16	9.0	8.0	14.0	10.5	11.0	10.0	20.0	15.0	14.0	13.0	16.0	11.0
17	8.0	7.0	14.5	10.5	10.0	9.0	20.0	15.0	17.0	11.5	14.0	11.5
18	7.0	6.0	13.5	10.5	11.0	9.5	20.5	15.5	18.5	11.0	14.0	12.0
19	6.5	6.0	12.0	10.5	14.0	10.5	20.0	16.0	19.0	11.5	12.0	12.0
20	9.0	6.5	10.5	9.5	15.0	11.0	18.5	15.5	19.0	12.0	12.0	11.5
21	9.5	6.5	13.0	9.0	15.0	13.0	16.5	15.0	18.5	11.5	12.0	11.0
22	9.0	8.0	11.5	10.0	16.0	13.5	15.5	14.5	18.0	11.0	12.0	11.5
23	8.0	8.0	10.5	10.0	15.0	13.0	16.0	14.0	14.0	11.5	12.0	11.0
24	8.0	7.0	10.5	9.5	13.0	12.0	17.0	13.5	14.5	12.0	12.0	11.0
25	10.0	6.5	9.5	8.5	12.0	12.0	20.0	12.0	18.0	11.0	13.0	10.5
26	10.5	8.0	10.5	8.5	13.0	11.5	21.0	13.5	16.5	12.0	13.5	10.0
27	10.0	7.0	9.5	8.5	14.5	11.5	21.5	14.0	15.0	12.0	14.5	10.5
28	8.0	6.0	13.5	9.0	14.0	11.5	22.0	14.0	16.0	12.0	15.0	11.0
29	9.0	5.5	14.5	10.0	13.0	11.0	21.0	11.0	16.0	13.0	13.0	12.0
30	10.0	6.0	14.5	11.0	11.5	10.5	21.0	13.5	13.5	12.0	13.5	10.5
31	---	---	13.5	10.5	---	---	21.0	14.0	15.0	11.5	---	---
MONTH	10.5	5.5	14.5	6.5	16.0	9.0	22.0	10.5	22.0	11.0	20.5	9.5

14238000 COWLITZ RIVER BELOW MAYFIELD DAM, WASH.

LOCATION.--Lat 46°30'38", long 122°36'54", in SE¼NE¼ sec.24, T.12 N., R.1 E., Lewis County, temperature recorder at gaging station on right bank, 1.4 mi (2.3 km) downstream from Mayfield Dam, 1.5 mi (2.4 km) upstream from Mill Creek, 2.1 mi (3.4 km) downstream from Winston Creek, and at mile 50.6 (81.4 km).

DRAINAGE AREA.--1,400 mi² (3,626 km²).

PERIOD OF RECORD.--Water temperatures: October 1950 to September 1973.

EXTREMES.--1972-73:
Water temperatures: Maximum, 14.0°C Sept. 15; minimum, 4.5°C Jan. 8 to Mar. 2.

Period of record:
Water temperatures: Maximum, 21.0°C July 28, 29, 1958; minimum, 0.5°C Jan. 28 to Feb. 2, 1956.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	10.0	10.0	10.0	10.0	9.5	9.0	5.5	5.0	4.5	4.5	4.5	4.5
2	10.0	10.0	10.0	10.0	9.0	9.0	5.0	5.0	4.5	4.5	5.0	4.5
3	11.0	10.0	10.0	10.0	9.0	9.0	5.0	5.0	4.5	4.5	5.0	5.0
4	11.0	10.5	10.0	10.0	9.0	9.0	5.0	5.0	4.5	4.5	5.0	5.0
5	10.5	10.5	10.0	10.0	9.0	8.5	5.0	5.0	4.5	4.5	5.0	5.0
6	10.5	10.0	10.0	10.0	8.5	8.0	5.0	5.0	4.5	4.5	5.0	5.0
7	10.0	10.0	10.0	10.0	8.0	8.0	5.0	5.0	4.5	4.5	5.0	5.0
8	10.5	10.0	10.0	10.0	8.0	8.0	5.0	4.5	4.5	4.5	5.0	5.0
9	10.5	10.5	10.0	10.0	8.0	7.0	4.5	4.5	4.5	4.5	5.0	5.0
10	10.5	10.5	10.0	10.0	7.0	7.0	4.5	4.5	4.5	4.5	5.0	5.0
11	10.5	10.5	10.0	10.0	7.0	7.0	4.5	4.5	4.5	4.5	5.0	5.0
12	10.5	10.0	10.0	10.0	7.0	7.0	4.5	4.5	4.5	4.5	5.0	5.0
13	10.0	10.0	10.0	10.0	7.0	7.0	4.5	4.5	4.5	4.5	5.0	5.0
14	10.5	10.0	10.0	10.0	7.0	7.0	4.5	4.5	4.5	4.5	5.0	5.0
15	10.5	10.5	10.0	10.0	7.0	6.5	4.5	4.5	4.5	4.5	5.0	5.0
16	10.5	10.5	10.0	10.0	6.5	6.5	4.5	4.5	4.5	4.5	5.0	5.0
17	10.5	10.5	10.0	10.0	6.5	6.5	4.5	4.5	4.5	4.5	5.0	5.0
18	10.5	10.5	10.0	10.0	6.5	6.5	4.5	4.5	4.5	4.5	5.0	5.0
19	10.5	10.5	10.0	10.0	6.5	6.5	4.5	4.5	4.5	4.5	5.0	5.0
20	10.5	10.5	10.0	10.0	6.5	6.5	4.5	4.5	4.5	4.5	5.0	5.0
21	10.5	10.5	10.0	10.0	6.5	6.0	4.5	4.5	4.5	4.5	5.0	5.0
22	10.5	10.5	10.0	9.5	6.5	6.0	4.5	4.5	4.5	4.5	5.5	5.0
23	10.5	10.5	9.5	9.5	6.5	6.0	4.5	4.5	4.5	4.5	5.5	5.5
24	10.5	10.5	9.5	9.5	6.5	6.0	4.5	4.5	4.5	4.5	5.5	5.5
25	10.5	10.0	9.5	9.5	6.5	6.5	4.5	4.5	4.5	4.5	5.5	5.0
26	10.0	10.0	9.5	9.5	6.5	6.5	4.5	4.5	4.5	4.5	5.5	5.0
27	10.0	10.0	9.5	9.5	6.5	6.0	4.5	4.5	4.5	4.5	5.5	5.5
28	10.0	10.0	9.5	9.5	6.0	6.0	4.5	4.5	4.5	4.5	5.5	5.5
29	10.0	10.0	9.5	9.0	6.0	6.0	4.5	4.5	---	---	6.0	5.5
30	10.0	10.0	9.0	9.0	6.0	6.0	4.5	4.5	---	---	6.0	6.0
31	10.0	10.0	---	---	6.0	5.5	4.5	4.5	---	---	6.0	6.0
MONTH	11.0	10.0	10.0	9.0	9.5	5.5	5.5	4.5	4.5	4.5	6.0	4.5

14238000 COWLITZ RIVER BELOW MAYFIELD DAM, WASH.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	6.0	6.0	9.5	7.0	10.0	9.0	11.5	10.0	9.5	9.5	12.0	11.5
2	6.0	6.0	9.0	8.0	11.0	9.0	11.5	10.5	10.0	9.0	12.0	11.5
3	6.0	6.0	8.5	7.0	10.5	9.5	11.0	10.5	10.0	9.0	12.0	11.0
4	6.0	6.0	9.0	7.0	10.5	9.0	11.5	10.5	10.5	9.0	12.0	11.0
5	6.0	6.0	9.0	7.0	11.0	9.5	11.5	10.0	10.5	9.5	11.0	9.5
6	6.5	6.0	8.5	7.0	11.0	10.0	11.0	10.5	10.5	9.0	11.0	9.5
7	7.0	6.5	8.0	7.0	11.5	10.0	11.5	10.0	10.0	9.0	10.5	9.5
8	7.0	7.0	8.0	6.5	10.5	9.5	11.0	10.5	9.5	9.0	10.5	10.0
9	8.0	7.0	8.0	6.5	11.0	9.5	11.5	10.5	9.5	9.5	11.0	10.5
10	7.0	6.5	8.0	8.0	11.5	10.0	11.5	10.0	10.5	9.5	11.5	10.5
11	8.0	7.0	9.5	7.0	11.0	10.5	13.0	10.0	10.0	9.5	11.5	10.5
12	8.0	7.0	9.5	9.0	11.0	10.0	13.5	10.5	10.0	9.5	11.5	11.0
13	8.5	7.0	9.0	7.0	11.5	10.0	13.5	10.0	10.5	9.5	12.0	11.0
14	8.5	8.0	9.0	8.0	10.5	10.5	11.5	10.5	11.0	10.0	12.0	11.0
15	8.5	8.0	10.0	8.5	10.5	9.5	12.0	10.0	10.0	9.5	14.0	12.0
16	8.5	6.5	9.5	9.5	10.5	9.0	11.5	10.0	10.0	9.5	13.5	12.0
17	6.5	6.5	10.0	9.0	10.0	9.0	11.5	10.0	10.5	10.0	13.0	11.5
18	7.0	6.5	10.5	9.0	11.0	9.0	11.0	10.0	10.5	9.5	12.0	12.0
19	8.0	7.0	10.0	9.5	11.0	10.5	11.5	10.0	10.5	9.5	13.0	12.0
20	8.5	8.0	10.0	9.0	11.0	10.5	11.5	10.0	10.0	9.5	12.0	10.0
21	8.5	8.0	11.0	9.5	11.5	10.5	12.0	10.5	10.0	10.0	11.0	10.0
22	8.0	6.5	10.5	9.5	12.0	10.0	11.0	10.0	11.5	10.0	11.5	11.0
23	7.0	6.5	10.5	9.5	11.5	9.5	12.0	10.5	11.0	10.5	11.0	10.5
24	8.5	7.0	9.5	8.5	13.0	11.5	12.0	11.0	11.5	10.5	11.5	10.5
25	8.5	8.5	10.0	9.0	13.0	11.5	11.0	10.0	11.5	10.5	11.0	10.0
26	8.5	7.0	10.0	9.5	11.5	11.0	12.0	10.5	11.0	10.5	12.0	10.5
27	8.0	6.5	11.0	9.5	11.5	10.5	12.0	10.5	11.0	10.5	11.0	10.0
28	9.0	6.5	10.0	8.5	11.5	10.5	11.5	10.0	12.0	10.5	11.0	10.0
29	9.5	8.5	9.0	9.0	11.0	10.0	10.5	10.0	11.5	10.5	11.0	10.0
30	9.5	8.0	9.0	8.5	11.0	10.0	10.5	9.5	11.0	10.5	11.0	10.5
31	---	---	10.0	8.5	---	---	10.0	9.5	11.0	11.0	---	---
MONTH	9.5	6.0	11.0	6.5	13.0	9.0	13.5	9.5	12.0	9.0	14.0	9.5

14243000 COWLITZ RIVER AT CASTLE ROCK, WASH.
(International hydrologic decade station)

LOCATION.--Lat 46°16'30", long 122°54'48", in SW¼SE¼ sec.10, T.9 N., R.2 W., Cowlitz County, at gaging station 40 ft (12 m) downstream from Arkansas Valley Road bridge in Castle Rock, 2.7 mi (4.3 km) downstream from Toutle River, and at mile 17.3 (27.8 km).

DRAINAGE AREA.--2,238 mi² (5,796 km²).

PERIOD OF RECORD.--Chemical analyses: October 1958 to September 1959, August 1966 to September 1973.
Water temperatures: August 1950 to September 1973 (discontinued).

EXTREMES.--1972-73:
Water temperatures: Maximum, 18.0°C July 14-18; minimum, 4.0°C Feb. 5-8.

Period of record:
Water temperatures: Maximum (1950-62, 1963-73), 24.0°C July 28-30, 1958; minimum, freezing point Jan. 29, 30, 1951.

REMARKS.--Temperature recorder not operating Sept. 14-30 (no range in temperature obtained).

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
OCT.												
16...	1535	8090	10	5.6	.7	4.5	.3	22	0	18	2.7	7.4
DEC.												
14...	1555	10400	13	5.5	1.0	3.0	.3	24	0	20	2.6	2.5
FEB.												
21...	1155	7400	13	5.1	1.1	3.1	.4	28	0	23	2.3	3.0
APR.												
25...	0945	4520	14	5.6	1.1	[illegible].5	.5	25	0	21	2.5	5.3
JUNE												
11...	1035	3200	14	7.[illegible]	1.3	7.2	.5	27	0	22	3.3	12

DATE	DISSOLVED FLUORIDE (F) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	CARBON DIOXIDE (CO2) (MG/L)
OCT.											
16...	.1	--	--	42	17	0	64	6.5	11.1	5	11
DEC.											
14...	.1	--	80	40	18	0	49	7.2	6.7	4	2.4
FEB.											
21...	.1	.05	52	42	17	0	69	7.0	4.4	3	4.5
APR.											
25...	.0	--	51	46	19	0	62	6.7	--	3	8.0
JUNE											
11...	.2	--	70	59	23	1	91	7.3	--	3	2.2

14243000 COWLITZ RIVER AT CASTLE ROCK, WASH.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.0	11.0	10.5	10.5	9.0	9.0	6.5	6.5	5.0	4.5	6.0	6.0
2	13.0	11.5	10.5	10.5	9.0	9.0	6.5	6.0	5.0	4.5	6.0	5.5
3	11.5	11.0	11.0	10.5	9.0	8.5	6.0	6.0	5.0	5.0	6.0	5.5
4	11.5	10.5	11.0	11.0	8.5	8.5	6.0	5.5	5.0	4.5	6.0	6.0
5	11.5	11.0	11.0	10.5	8.5	8.0	5.5	5.5	4.5	4.0	6.5	6.0
6	11.0	11.0	10.5	10.5	8.0	7.0	5.5	5.5	4.5	4.0	7.0	6.5
7	11.5	10.5	11.0	10.5	7.0	7.0	5.5	5.0	4.5	4.0	7.0	6.5
8	11.5	11.0	11.0	10.5	7.0	6.0	5.5	5.0	4.5	4.0	7.0	7.0
9	12.0	11.5	10.5	10.5	6.5	6.5	5.0	4.5	4.5	4.5	7.0	6.5
10	11.5	10.5	10.5	10.5	6.5	6.0	5.0	4.5	5.0	4.5	7.0	6.5
11	11.0	10.5	10.5	10.5	6.5	6.0	5.0	5.0	5.0	4.5	7.0	6.0
12	11.0	10.5	10.5	10.0	6.5	6.0	5.0	5.0	5.0	5.0	6.5	6.0
13	11.0	10.5	10.0	10.0	6.5	6.5	5.5	5.0	5.0	4.5	6.5	6.0
14	11.0	11.0	10.0	10.0	6.5	6.5	5.5	5.5	5.0	4.5	6.5	6.5
15	11.0	11.0	10.0	9.5	6.5	6.5	5.5	5.5	5.0	4.5	7.0	6.5
16	11.5	11.0	9.5	9.5	6.5	6.5	5.5	5.5	5.0	5.0	7.0	7.0
17	11.5	11.0	9.5	9.5	6.5	6.0	5.5	5.5	5.0	5.0	7.0	6.0
18	11.5	11.0	9.5	9.5	6.5	5.5	5.5	5.5	5.0	5.0	6.5	6.0
19	11.0	11.0	9.5	9.5	6.5	6.5	5.5	5.0	5.0	4.5	6.5	6.0
20	11.0	11.0	9.5	9.5	6.5	6.5	5.0	5.0	5.0	4.5	7.0	6.5
21	11.0	11.0	9.5	9.5	7.0	6.5	5.0	5.0	5.0	4.5	7.0	6.5
22	11.0	11.0	9.5	9.5	7.0	7.0	5.0	5.0	5.0	4.5	7.0	6.5
23	11.0	11.0	9.5	9.5	7.0	7.0	5.0	5.0	5.5	5.0	8.0	6.5
24	11.0	10.5	9.5	9.5	7.0	7.0	5.0	5.0	5.5	5.0	8.0	7.0
25	11.0	10.5	9.5	9.5	7.0	7.0	5.0	5.0	6.0	5.5	8.5	8.0
26	11.0	10.5	9.5	9.0	7.0	7.0	5.0	4.5	6.0	6.0	8.0	7.0
27	11.0	10.5	9.0	9.0	7.0	7.0	5.0	4.5	6.0	6.0	7.0	7.0
28	11.0	10.5	9.0	9.0	7.0	6.5	5.0	4.5	6.0	6.0	8.0	7.0
29	10.5	10.5	9.0	9.0	6.5	6.5	5.0	4.5	---	---	8.5	7.0
30	10.5	10.5	9.0	9.0	6.5	6.5	5.0	4.5	---	---	8.0	7.0
31	10.5	10.5	---	---	6.5	6.5	5.0	5.0	---	---	8.0	7.0
MONTH	13.0	10.5	11.0	9.0	9.0	5.5	6.5	4.5	6.0	4.0	8.5	5.5

14243000 COWLITZ RIVER AT CASTLE ROCK, WASH.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.5	7.0	12.0	10.0	13.5	12.0	13.5	11.5	12.0	11.0	12.0	11.5
2	8.5	8.0	11.0	10.5	13.5	12.0	15.0	13.0	13.0	11.0	14.5	12.0
3	9.0	7.0	11.5	11.0	14.0	12.0	16.0	14.5	13.0	11.0	14.5	13.0
4	9.0	8.0	11.5	10.0	14.5	13.5	16.0	14.5	13.0	11.5	15.5	13.5
5	9.0	8.5	10.0	10.0	15.5	13.5	14.5	13.5	13.0	13.0	15.5	14.0
6	8.5	8.5	10.0	10.0	15.5	13.5	13.5	13.0	13.5	13.0	14.5	13.0
7	9.0	8.5	10.0	10.0	13.5	13.0	14.5	13.0	13.5	11.5	13.0	12.0
8	10.0	9.0	10.0	9.0	14.0	13.0	15.5	14.5	13.5	13.0	14.0	12.0
9	10.0	9.5	10.0	8.5	13.5	12.0	16.0	14.5	13.5	12.0	15.0	12.0
10	11.0	10.0	10.5	9.5	14.5	12.0	16.5	15.0	13.0	12.0	16.0	13.5
11	11.5	10.5	11.0	9.5	15.0	13.5	15.5	14.5	14.0	13.0	16.0	14.0
12	11.5	10.5	13.0	11.0	14.5	13.5	16.5	14.5	14.5	13.5	15.0	13.5
13	12.0	10.5	14.5	13.0	14.0	13.0	17.0	15.0	16.0	14.0	14.5	13.5
14	11.0	9.5	15.5	14.0	13.5	12.0	18.0	15.5	15.5	14.0	---	---
15	10.0	9.5	14.5	14.0	12.0	12.0	18.0	15.5	14.0	12.0	---	---
16	10.0	10.0	14.5	14.0	12.0	11.5	18.0	15.5	13.0	12.0	---	---
17	10.0	8.5	15.0	14.0	11.5	11.0	18.0	15.5	13.0	11.5	---	---
18	8.5	8.0	15.5	13.5	11.5	11.0	18.0	15.5	13.5	13.0	---	---
19	9.5	8.0	13.5	13.0	14.5	11.0	16.5	14.5	15.0	13.5	---	---
20	10.0	9.0	13.0	11.5	16.0	14.0	14.5	14.0	15.0	13.5	---	---
21	11.0	10.0	13.0	11.5	16.5	15.5	14.0	13.0	13.5	13.0	---	---
22	12.0	11.0	14.0	13.0	17.0	15.5	13.5	13.5	13.5	12.0	---	---
23	11.0	10.0	13.0	12.0	16.0	14.0	13.5	13.0	13.5	11.5	---	---
24	10.0	9.5	13.0	12.0	14.0	13.0	13.5	12.0	12.0	11.5	---	---
25	10.5	9.5	12.0	11.0	14.0	13.0	14.0	12.0	14.0	11.5	---	---
26	12.0	10.5	11.5	11.0	14.5	13.5	14.5	11.0	14.5	12.0	---	---
27	11.5	10.5	12.0	11.0	16.0	14.5	15.0	13.0	13.5	12.0	---	---
28	10.5	9.0	13.5	11.0	16.0	14.5	15.5	12.0	13.0	12.0	---	---
29	10.5	9.0	15.0	13.5	14.5	13.0	17.0	15.0	14.5	12.0	---	---
30	12.0	10.5	15.5	14.0	13.0	11.5	15.0	13.5	13.5	11.5	---	---
31	---	---	14.0	13.0	---	---	13.5	11.0	11.5	11.0	---	---
MONTH	12.0	7.0	15.5	8.5	17.0	11.0	18.0	11.0	16.0	11.0	---	---

14244200 COWLITZ RIVER AT KELSO, WASH.

LOCATION.--Lat 46°08'44", long 122°54'47", near center of SE¼ sec.27, T.8 N., R.2 W., at Main Street bridge between Kelso and West Kelso, 3.6 mi (5.8 km) upstream from Coweman River, and at mile 4.9 (7.9 km).

DRAINAGE AREA.--2,349 mi² (6,084 km²).

PERIOD OF RECORD.--Chemical analyses: July 1960 to September 1966, October 1971 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)
OCT.							
05...	0800	6680	54	7.4	11.7	6	3
16...	1635	6260	89	7.5	12.6	13	1
30...	1705	7700	53	7.5	9.5	13	4
NOV.							
13...	1635	6860	53	7.4	9.8	19	4
27...	1600	11000	35	7.3	7.7	6	5
DEC.							
19...	1605	16100	43	7.2	6.6	36	46
26...	1630	34300	38	6.6	7.5	56	25
JAN.							
08...	1620	15400	61	7.3	2.2	27	20
22...	1615	14100	51	7.1	5.2	25	10
FEB.							
05...	1610	8360	37	7.4	6.2	17	6
20...	1550	6740	61	7.2	6.9	17	5
MAR.							
05...	1630	8300	56	7.3	6.9	25	5
19...	1645	11000	130	7.3	6.2	21	3
APR.							
02...	1615	7400	170	7.4	8.9	22	4
16...	1630	4500	74	7.5	10.2	20	4
MAY							
07...	1600	4020	90	7.4	10.3	13	2
14...	1645	4320	85	7.5	17.4	21	2
JUNE							
05...	1630	3320	98	7.5	17.1	17	1
18...	1705	4000	86	7.6	13.7	26	2
JULY							
10...	2005	2980	106	7.5	17.7	10	2
23...	1725	2800	76	7.7	16.0	10	1
AUG.							
13...	1555	2950	130	7.5	16.8	12	1
27...	1545	2620	280	7.6	14.0	9	2
SEP.							
10...	1625	2600	114	7.6	17.4	9	2
24...	1510	3450	108	7.4	14.8	23	5

14244200 COWLITZ RIVER AT KELSO, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED OXYGEN (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
OCT.							
05...	--	350	0	1	4	.1	10
16...	11.2	500	0	6	7	1.2	0
30...	11.5	250	0	4	2	.2	10
NOV.							
13...	11.2	300	0	3	1	1.8	30
27...	11.8	470	0	6	1	.3	20
DEC.							
19...	12.1	<1600	0	5	3	.7	20
26...	12.4	<1600	0	5	4	.0	10
JAN.							
08...	13.5	150	0	3	3	.5	20
22...	13.0	400	0	4	7	.3	10
FEB.							
05...	13.0	120	0	2	1	.2	0
20...	12.3	100	0	5	4	.2	0
MAR.							
05...	11.8	150	10	1	3	.1	20
19...	11.7	400	0	4	10	.0	20
APR.							
02...	12.5	100	0	15	2	.2	0
16...	11.3	500	0	8	9	.8	10
MAY							
07...	11.4	80	0	12	7	.0	10
14...	10.4	200	0	8	5	.4	40
JUNE							
05...	10.6	100	0	5	2	.3	40
18...	11.2	450	0	5	[illegible]	.1	10
JULY							
10...	10.3	140	0	3	0	.1	0
23...	10.4	50	0	4	1	0	0
AUG.							
13...	10.0	100	0	2	0	.0	10
27...	10.4	120	0	2	1	.0	0
SEP.							
10...	10.1	100	0	2	9	.0	110
24...	10.2	6	0	0	6	.0	10

14247500 ELOCHOMAN RIVER NEAR CATHLAMET, WASH.

LOCATION.--Lat 46°13'17", long 123°20'28", in NE¼SE¼ sec.31, T.9 N., R.5 W., Wahkiakum County, at former gaging station, 2.4 mi (3.9 km) northeast of Cathlamet, and at mile 5.0 (8.0 km).

DRAINAGE AREA.--65.8 mi^2 (170.4 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).
Water temperatures: June 1950 to October 1971.

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT.										
03...	1500	--	5.5	1.6	5.1	.7	28	--	23	4.3
16...	1520	31	7.2	1.8	6.1	.9	31	--	25	8.6
30...	1550	62	6.3	1.7	4.8	.7	26	--	21	5.2
NOV.										
13...	1540	170	5.9	1.5	4.7	.5	26	0	21	4.2
27...	1500	285	5.0	1.2	4.1	.5	20	--	16	4.4
DEC.										
19...	1510	1180	4.3	.9	3.3	.4	15	0	12	4.1
26...	1530	3700	3.1	.9	3.1	1.7	13	0	11	5.5
JAN.										
08...	1520	320	4.7	3.0	20	1.1	17	0	14	6.8
22...	1520	550	3.8	1.0	4.1	.7	18	--	15	4.7
FEB.										
05...	1515	235	4.4	1.0	3.4	.4	24	--	20	2.6
20...	1445	153	4.7	1.3	4.2	.5	21	--	17	4.3
MAR.										
05...	1535	275	4.5	.9	4.0	.4	21	--	17	3.8
19...	1600	385	3.9	1.0	3.6	.6	18	--	15	3.5
APR.										
02...	1515	190	4.6	1.1	3.8	.5	22	--	18	5.0
16...	1530	265	4.7	1.0	4.4	.8	20	0	16	3.7
MAY										
07...	1435	127	4.8	1.1	3.9	.6	23	--	19	3.3
14...	1550	127	5.0	1.3	3.9	.3	24	--	20	4.1
JUNE										
05...	1530	82	5.3	1.3	4.0	.5	30	--	25	2.8
18...	1605	240	4.4	1.1	3.9	.4	28	--	23	3.2
JULY										
10...	1905	83	5.5	1.4	4.3	.6	29	--	24	2.8
23...	1615	55	5.7	1.3	4.6	.6	26	--	21	5.2
AUG.										
13...	1445	33	6.5	1.7	5.7	.7	30	--	25	4.3
27...	1445	32	6.5	1.8	5.6	1.0	32	--	26	4.9
SEP.										
10...	1525	25	6.7	1.7	5.5	.8	31	--	25	3.8
24...	1410	480	5.4	1.1	4.4	.9	26	--	21	3.8

14247500 ELOCHOMAN RIVER NEAR CATHLAMET, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)	ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)
OCT.									
03...	6.5	.30	.00	.14	.22	.36	.04	.03	20
16...	8.6	.14	.00	.29	.49	.78	.06	.05	25
30...	6.5	.34	.01	.08	.13	.21	.03	.00	23
NOV.									
13...	5.3	.50	.00	.05	.11	.16	.02	.00	21
27...	4.3	.70	.00	.05	.09	.14	.02	.00	17
DEC.									
19...	3.3	.83	.00	.13	.27	.40	.09	.00	14
26...	4.1	.64	.03	.16	.35	.51	.24	.00	11
JAN.									
08...	34	.44	.00	.03	.04	.07	.02	.00	24
22...	4.8	.40	.00	.07	.07	.14	.00	.00	14
FEB.									
05...	3.6	.35	.00	.05	.12	.17	.02	.00	15
20...	4.8	.30	.00	.15	.23	.38	.02	.00	17
MAR.									
05...	3.6	.92	.00	.08	.14	.22	.01	.00	15
19...	2.9	.37	.00	.12	.21	.33	.03	.00	14
APR.									
02...	3.7	.29	.00	.08	.09	.17	.02	.01	16
16...	4.0	.22	.00	.11	.11	.22	.08	.01	16
MAY									
07...	3.8	.19	.00	.07	.09	.16	.02	.01	17
14...	4.4	.19	.00	.10	.12	.22	.02	.01	18
JUNE									
05...	4.8	.14	.00	.11	.11	.22	.03	.02	19
18...	3.3	.38	.00	.07	.00	.07	.02	.00	16
JULY									
10...	4.8	.14	.00	.12	.03	.15	.03	.01	20
23...	5.6	.09	.00	.06	.13	.19	.03	.02	20
AUG.									
13...	6.8	.15	.00	.15	.16	.31	.05	.03	23
27...	7.7	.14	.00	.19	.13	.32	.05	.03	24
SEP.									
10...	8.0	.18	.01	.26	.39	.65	.08	.04	24
24...	3.8	.76	.01	.08	.58	.66	.14	.00	

14247500 ELOCHOMAN RIVER NEAR CATHLAMET, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	NON-CARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	DISSOLVED OXYGEN (MG/L)	CARBON DIOXIDE (CO2) (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)
OCT.									
03...	0	72	7.2	12.6	7	1	10.2	2.8	500
16...	0	87	7.0	11.2	40	1	10.4	5.0	1000
30...	1	67	7.4	6.0	90	2	12.2	1.7	600
NOV.									
13...	0	63	7.3	8.2	33	1	11.9	2.1	800
27...	1	41	7.2	6.0	8	2	12.6	2.0	380
DEC.									
19...	2	49	7.3	6.7	80	15	12.1	1.2	1200
26...	1	43	6.6	7.6	73	65	12.0	5.2	>1600
JAN.									
08...	10	180	7.2	2.1	17	2	14.2	1.7	150
22...	0	65	7.0	5.6	15	6	12.9	2.9	250
FEB.									
05...	0	58	7.4	5.3	12	2	13.2	1.5	100
20...	0	63	7.2	7.0	11	3	13.2	2.1	200
MAR.									
05...	0	60	7.4	8.2	18	2	12.1	1.3	300
19...	0	60	7.4	6.5	30	3	12.4	1.1	400
APR.									
02...	0	62	7.4	9.5	20	2	12.2	1.4	150
16...	0	54	7.4	10.0	38	6	11.5	1.3	1100
MAY									
07...	0	67	7.2	10.1	19	2	11.7	2.3	220
14...	0	65	7.5	16.7	23	2	10.4	1.2	700
JUNE									
05...	0	75	7.6	17.0	25	1	10.4	1.2	600
18...	0	52	7.5	12.0	29	2	11.4	1.4	1000
JULY									
10...	0	73	7.4	16.0	19	2	9.8	1.8	500
23...	0	72	7.6	16.4	157	1	9.9	1.0	550
AUG.									
13...	0	86	7.4	16.7	26	1	9.5	1.9	1300
27...	0	96	7.4	13.6	22	3	10.2	2.0	2500
SEP.									
10...	0	88	7.3	18.9	30	1	9.0	2.5	3000
24...	0	61	7.2	12.8	75	14	10.2	2.6	13000

14250900 GRAYS RIVER NEAR GRAYS RIVER, WASH.

LOCATION.--Lat 46°21'34", long 123°33'55", in SE¼SE¼ sec.8, T.10 N., R.7 W., Wahkiakum County, at U.S. Highway 830 crossing, 2.2 mi (3.5 km) east of town of Grays River.

DRAINAGE AREA.--92.5 mi^2 (239.6 km^2).

PERIOD OF RECORD.--Chemical analyses: October 1972 to September 1973 (discontinued).

REMARKS.--Dissolved oxygen, pH, turbidity, color, specific conductance and coliform data furnished by Washington State Department of Ecology.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT.										
03...	1420	198	5.0	1.2	5.5	.2	21	--	17	6.8
16...	1510	146	6.0	1.3	6.1	1.0	26	--	21	7.1
30...	1515	206	5.8	2.2	14	.7	24	--	20	7.2
NOV.										
13...	1500	530	4.9	2.0	11	.6	20	0	16	5.6
27...	1435	610	4.5	1.2	6.3	.5	19	--	16	4.3
DEC.										
19...	1430	3000	3.6	.7	3.3	.3	14	0	11	4.4
26...	1500	8300	3.0	.9	3.5	1.6	14	0	11	7.9
JAN.										
08...	1435	360	2.9	1.2	6.7	1.3	13	0	11	5.6
22...	1445	810	4.0	.9	4.2	.7	20	--	16	4.3
FEB.										
05...	1445	380	4.5	.9	4.2	.3	20	--	16	3.2
20...	1355	280	4.5	1.0	4.7	.5	21	--	17	4.4
MAR.										
05...	1500	650	4.1	1.6	11	.5	18	--	15	5.6
19...	1500	860	3.8	.8	3.3	.4	17	--	14	3.0
APR.										
02...	1440	340	4.4	.9	3.8	.3	25	--	21	5.2
16...	1450	510	4.2	.8	4.4	.4	23	0	19	3.6
MAY										
07...	1400	192	4.9	1.1	4.3	.4	23	--	19	4.3
14...	1515	245	4.9	1.8	12	.5	22	--	18	6.3
JUNE										
05...	1500	183	4.9	1.0	4.3	.4	28	--	23	3.4
18...	1530	650	3.8	.9	3.9	.3	22	--	18	2.9
JULY										
10...	1830	162	5.3	1.2	4.3	.4	30	--	25	3.7
23...	1525	110	5.6	1.1	4.5	.3	27	--	22	5.2
AUG.										
13...	1400	58	6.3	1.3	5.6	.5	34	--	28	5.9
27...	1405	49	6.2	1.1	6.0	1.0	32	--	26	6.7
SEP.										
10...	1440	39	6.4	1.3	5.8	.8	33	--	27	5.7
24...	1330	740	4.5	.9	4.6	.6	25	--	21	4.2

14250900 GRAYS RIVER NEAR GRAYS RIVER, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	TOTAL NITRATE (N) (MG/L)	TOTAL NITRITE (N) (MG/L)	AMMONIA NITRO-GEN (N) (MG/L)	ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	HARD-NESS (CA,MG) (MG/L)
OCT.									
03...	5.4	.14	.00	.00	.13	.13	.01	.00	17
16...	6.2	.05	.00	.05	.17	.22	.01	.00	20
30...	21	.14	.00	.02	.07	.09	.01	.00	24
NOV.									
13...	17	.26	.00	.03	.03	.06	.01	.00	20
27...	8.4	.31	.00	.03	.01	.04	.01	.00	16
DEC.									
19...	3.3	.54	.01	.23	.12	.35	.15	.00	12
26...	3.7	.38	.04	.23	.33	.56	.48	.00	11
JAN.									
08...	8.8	.33	.00	.03	.07	.10	.02	.00	12
22...	4.9	.30	.01	.05	.07	.12	.02	.00	14
FEB.									
05...	4.3	.26	.00	.03	.01	.04	.01	.00	15
20...	4.6	.21	.00	.10	.36	.46	.01	.00	15
MAR.									
05...	17	.17	.00	.03	.10	.13	.00	.00	17
19...	3.1	.22	.00	.03	.18	.21	.02	.00	13
APR.									
02...	3.1	.17	.00	.06	.10	.16	.01	.00	15
16...	2.7	.14	.00	.07	.08	.15	.09	.00	14
MAY									
07...	3.3	.13	.00	.05	.09	.14	.02	.00	17
14...	16	.14	.00	.07	.06	.13	.02	.00	20
JUNE									
05...	3.6	.10	.00	.05	.02	.07	.01	.00	16
18...	3.4	.16	.00	.10	.00	.10	.02	.00	13
JULY									
10...	3.1	.11	.00	.08	.03	.11	.00	.00	18
23...	3.0	.10	.00	.02	.05	.07	.01	.00	19
AUG.									
13...	4.1	.11	.00	.03	.10	.13	.01	.00	21
27...	4.3	.11	.00	.11	.00	.11	.01	.00	20
SEP.									
10...	4.8	.13	.00	.13	.38	.51	.01	.00	21
24...	3.5	.72	.01	.11	.48	.59	.08	.00	15

14250900 GRAYS RIVER NEAR GRAYS RIVER, WASH.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

DATE	NON-CAR-BONATE HARO-NESS (MG/L)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BIO-ITY (JTU)	OIS-SOLVED OXYGEN (MG/L)	CARBON DIOXIOE (CO2) (MG/L)	IMME-OIATE COLI-FORM (COL. PER 100 ML)
OCT.									
03...	0	55	7.2	12.6	10	2	10.3	2.1	240
16...	0	68	7.1	13.2	15	1	12.1	3.3	220
30...	4	120	7.4	7.8	16	2	11.8	1.5	210
NOV.									
13...	4	96	7.3	8.8	17	2	11.3	1.6	300
27...	1	55	7.2	6.8	6	3	12.0	1.9	100
DEC.									
19...	0	37	7.3	8.1	100	35	12.1	1.1	1600
26...	0	37	6.8	7.5	67	85	12.3	3.6	1100
JAN.									
08...	2	62	7.2	1.7	10	9	13.7	1.3	<100
22...	0	61	7.0	5.6	12	5	12.7	3.2	130
FEB.									
05...	0	60	7.4	6.0	7	3	13.0	1.3	70
20...	0	64	7.1	7.8	7	4	13.0	2.7	70
MAR.									
05...	2	111	7.3	7.8	15	3	12.2	1.4	56
19...	0	83	7.5	7.4	34	4	12.1	.9	120
APR.									
02...	0	70	7.4	10.4	17	3	12.3	1.6	64
16...	0	84	7.4	9.0	29	8	11.5	1.5	800
MAY									
07...	0	63	7.0	10.0	18	3	11.2	3.7	110
14...	2	65	7.4	16.0	13	2	9.8	1.4	80
JUNE									
05...	0	95	7.6	16.3	14	1	10.1	1.1	140
18...	0	47	7.4	12.0	18	4	11.0	1.4	500
JULY									
10...	0	98	7.5	14.2	7	1	9.9	1.5	375
23...	0	63	7.4	15.0	88	3	9.7	1.7	200
AUG.									
13...	0	82	7.2	15.5	9	1	9.3	3.4	460
27...	0	90	7.3	14.0	10	3	10.0	2.6	600
SEP.									
10...	0	81	7.3	19.1	7	1	9.1	2.6	230
24...	0	50	7.2	13.2	69	35	10.0	2.5	12000

Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)
12009500. Bear Branch near Naselle, Wash. (Lat 46°19'48", long 123°54'36")											
1972				1973				1973			
Nov. 6	1450	80	9.0	Feb. 22	1140	29	6.5	June 26	0820	147	10.5
Dec. 22	1100	397	8.5	Apr. 18	0815	64	7.0	Aug. 22	1200	7.5	13.0
12010700. South Fork Naselle River near Naselle, Wash. (Lat 46°20'39", long 123°48'23")											
1972				1973				1973			
Nov. 6	1715	159	8.5	Apr. 17	1325	102	9.0	July 23	1045	13	13.0
Dec. 29	0955	276	6.5	June 26	1605	181	19.5	Aug. 22	0925	5.0	12.0
Feb. 23	0815	34	5.5								
12011200. Williams Creek near South Bend, Wash. (Lat 46°31'49", long 123°51'39")											
1972				1973				1973			
Oct. 10	1730	17	11.5	Apr. 18	1315	70	8.5	July 23	0840	20	11.5
Dec. 21	1235	504	9.0	June 26	1200	54	11.5	Aug. 20	1630	13	14.5
Feb. 16	1055	40	8.0								
12015100 Clearwater Creek near Raymond, Wash. (Lat 46°44'59", long 123°45'59")											
1972				1973				1973			
Oct. 11	1150	6.7	8.5	Feb. 13	1020	17	5.0	June 5	1600	9.0	13.5
Dec. 13	1000	8.9	0.0	Apr. 10	1650	11	10.5	Aug. 17	1405	5.3	13.0
12020000. Chehalis River near Doty, Wash. (Lat 46°37'03", long 123°16'35")											
1972				1973				1973			
Oct. 11	1530	90	10.0	Feb. 7	1300	325	4.0	July 24	0815	63	13.0
Dec. 13	1330	186	0.0	Apr. 9	1520	195	11.5	Aug. 20	1200	37	14.5
Dec. 19	1555	2,470	7.0	June 4	1600	131	17.0				
12020900. South Fork Chehalis River near Boistfort, Wash. (Lat 46°31'38", long 123°06'58")											
1972				1973				1973			
Oct. 10	1120	8.1	9.5	Feb. 12	0930	100	5.0	June 4	1320	32	15.0
Dec. 13	1515	35	0.0	Apr. 9	1250	65	10.0	Aug. 16	1730	3.2	18.0
Dec. 21	1315	1,970	8.5								
12025000. Newaukum River near Chehalis, Wash. (Lat 46°37'13", long 122°56'38")											
1972				1973				1973			
Oct. 18	1355	42.2	9.5	Feb. 22	0920	279	4.0	July 25	1150	60.1	17.0
Dec. 19	1250	1,580	5.5	Apr. 25	0910	287	8.5	Aug. 16	1515	45.6	17.0
Dec. 27	1000	4,500	6.5	June 26	1045	692	14.5				
12025700. Skookumchuck River near Vail, Wash. (Lat 46°46'22", long 122°35'34")											
1972				1973				1973			
Oct. 17	1440	25	6.5	Feb. 22	1210	109	5.0	June 20	1005	110	9.5
Dec. 13	1030	44	0.0	Apr. 19	1330	200	6.5	Aug. 2	0945	33	13.5
Feb. 14	1440	100	4.5								
12026150. Skookumchuck River below Bloody Run Creek near Centralia, Wash. (Lat 46°47'25", long 122°44'03")											
1972				1973				1973			
Oct. 12	1205	138	11.5	Apr. 19	1505	284	9.0	June 19	1110	110	15.5
Dec. 12	1200	110	4.0	Apr. 24	1100	175	10.0	Aug. 3	1000	77	14.5
1973				June 18	1330	146	15.5				
Feb. 13	0945	258	4.0								
12026400. Skookumchuck River near Bucoda, Wash. (Lat 46°46'20", long 122°55'23")											
1972				1973				1973			
Oct. 13	1615	145	11.5	Feb. 22	0945	149	4.5	June 19	1335	158	16.5
Dec. 13	1545	110	1.5	Apr. 18	0905	295	8.5	Aug. 3	1350	78.0	18.0
Feb. 14	0915	296	4.0								
12027500. Chehalis River near Grand Mound, Wash. (Lat 46°46'34", long 123°02'04")											
1972				1973				1973			
Oct. 3	1105	438	12.0	Feb. 12	1325	1,870	5.0	Aug. 3	1515	219	21.5
Dec. 18	1330	6,280	1.0	Apr. 18	0915	3,340	8.0	Aug. 18	0820	206	15.5
1973				July 16	0845	324	20.5				
Jan. 4	1015	3,620	3.5								

Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)
12035000. Satsop River near Satsop, Wash. (Lat 47°00'03", long 123°29'37")											
1972				1973				1973			
Oct. 12	1100	395	8.5	Apr. 11	1445	812	12.0	Aug. 18	1230	301	14.0
Dec. 14	1110	748	1.5	June 6	1530	639	13.5	Sept. 7	0800	271	13.0
1973				July 16	1315	456	18.5	Sept. 17	1345	228	14.0
Feb. 14	1015	1,280	5.5								
12035400. Wynoochee River near Grisdale, Wash. (Lat 47°22'50", long 123°36'31")											
1972				1973				1973			
Oct. 11	1620	105	9.5	Mar. 13	1225	71.1	6.5	June 22	1135	206	16.0
Dec. 12	1440	203	5.0	Apr. 18	1445	204	9.0	Aug. 17	1600	217	10.5
1973				June 12	1555	210	12.5				
Feb. 13	1710	266	4.5								
12035450. Big Creek near Grisdale, Wash. (Lat 47°22'18", long 123°38'08")											
1972				1973				1973			
Oct. 10	1330	22.7	8.5	Apr. 18	1700	89.4	6.0	July 18	1400	22.7	14.0
Dec. 14	1535	37.5	4.0	May 18	1520	32.5	12.0	Aug. 16	1330	17.5	11.0
1973				June 15	1415	68.4	9.0				
Feb. 14	1135	62.1	5.5								
12036000. Wynoochee River above Save Creek, near Aberdeen, Wash. (Lat 47°17'57", long 123°39'07")											
1972				1973				19[illegible]			
Oct. 24	1325	209	9.0	Feb. 13	1440	497	5.5	June 12	[illegible]	456	12.0
Dec. 12	1215	367	4.0	Apr. 18	1115	458	6.5	Aug. 17	1305	288	11.5
12036650. Anderson Creek near Montesano, Wash. (Lat 47°07'02", long 123°39'17")											
1972				1973				1973			
Oct. 10	1610	1.21	8.0	Apr. 19	1535	13.4	8.5	June 11	1605	2.37	13.0
Dec. 11	1615	5.67	1.0	May 22	1205	3.16	10.5	Aug. 14	1615	.14	14.5
1973				June 1	1355	4.71	11.0				
Feb. 12	1640	6.76	5.5								
12039000. Humptulips River near Humptulips, Wash. (Lat 47°13'42", long 123°56'23")											
1972				1973				1973			
Oct. 13	1105	254	8.0	Feb. 15	1520	716	6.0	June 13	1120	977	10.5
Nov. 20	1450	746	7.0	Mar. 16	1120	1,320	6.5	Aug. 15	1330	173	14.5
Dec. 14	1050	466	3.0	May 17	1055	490	12.0				
12043100. Dickey River near LaPush, Wash. (Lat 47°57'53", long 124°32'53")											
1972				1973				1973			
Oct. 6	0950	54.2	8.5	Feb. 8	1035	284	3.0	June 20	1730	329	15.0
Dec. 7	1450	208	0	Apr. 12	1715	106	12.0	Aug. 23	1000	18.5	12.0
12043300. Hoko River near Sekiu, Wash. (Lat 48°14'30", long 124°22'57")											
1972				1973				1973			
Oct. 5	1400	41.2	9.0	Feb. 7	1340	263	3.5	June 20	1210	252	11.5
Dec. 6	1200	212	0	Apr. 11	1445	92.8	11.5	Aug. 22	1635	21.0	15.0
12045500. Elwha River at McDonald Bridge near Port Angeles, Wash. (Lat 48°03'18", long 123°34'55")											
1972				1973				1973			
Oct. 3	1000	786	9.0	Feb. 6	1525	832	4.0	Aug. 21	1530	529	15.5
Dec. 5	1600	567	3.5	June 19	1615	1,410	9.5				
12047300. Morse Creek near Port Angeles, Wash. (Lat 48°02'16", long 123°20'57")											
1972				1973				1973			
Oct. 4	0915	33.7	5.5	Apr. 10	1525	54.4	6.5	June 19	0940	73.9	7.0
Dec. 5	0940	37.6	0	Apr. 11	0955	48.6	5.0	Aug. 21	1000	22.5	8.0
1973											
Feb. 6	1045	59.2	1.0								
12048000. Dungeness River near Sequim, Wash. (Lat 48°00'52", long 123°07'53")											
1972				1973				1973			
Oct. 3	1450	183	9.0	Feb. 5	1610	185	1.0	June 18	1500	347	7.0
Dec. 4	1410	93.5	1.0	Apr. 10	1040	170	6.0	Aug. 22	1100	157	8.5

WATER TEMPERATURES COLLECTED AT PARTIAL-RECORD SITES
WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)
12058000. Deer Meadow Creek near Hoodsport, Wash. (Lat 47°24'56", long 123°13'46")											
1972				1973				1973			
Oct. 12	1300	0.5	9.0	Feb. 14	1415	3.5	4.5	June 19	1400	1.4	8.0
1973				Apr. 24	1320	1.7	10.0				
Jan. 04	1040	14	3.0								
12060500. South Fork Skokomish River near Union, Wash. (Lat 47°20'26", long 123°16'40")											
1972				1973				1973			
Oct. 13	1155	138	8.5	Feb. 8	1100	419	4.0	June 14	1400	360	9.0
Dec. 7	1000	319	1.0	Apr. 12	1100	356	5.0				
12069550. Big Beef Creek near Seabeck, Wash. (Lat 47°38'27", long 122°47'02")											
1972				1973				1973			
Oct. 24	1505	4.63	9.4	Apr. 25	1210	13.2	5.6	Aug. 10	1330	4.08	13.3
1973				June 21	1100	8.16	10.0				
Feb. 28	1010	92.4	5.0								
12072000. Chico Creek near Bremerton, Wash. (Lat 47°35'28", long 122°42'29")											
1972				1973				1973			
Oct. 24	1300	2.12	8.9	Feb. 15	1305	21.8	5.0	June 21	1320	6.08	16.7
Dec. 19	1240	159	5.6	May 2	1455	9.69	11.7	Aug. 10	1115	1.86	17.2
12078650. Snyder Creek near Olympia, Wash. (Lat 47°05'09", long 122°58'24")											
1972				1973				1973			
Oct. 16	1500	0.76	8.0	Feb. 12	1105	0.92	6.5	Sept. 20	1145	0.99	11.0
Dec. 1	1545	.72	8.5	Apr. 18	1505	1.43	8.5				
Dec. 11	1330	.70	4.5	June 20	1525	.64	11.0				
Dec. 18	1625	3.75	6.0	Aug. 7	1015	.58	11.0				
12079000. Deschutes River near Rainier, Wash. (Lat 46°51'08", long 122°40'03")											
1972				1973				1973			
Oct. 17	0945	36.4	8.0	Feb. 14	1310	146	4.5	June 19	1610	108	15.0
Nov. 17	1005	73.6	5.0	Feb. 22	1410	143	5.0	July 25	1450	39.9	18.0
Dec. 13	1230	64.7	0.5	Apr. 18	1250	189	7.0	Aug. 2	1200	35.8	18.5
Dec. 26	1315	1,680	6.0								
12083000. Mineral Creek near Mineral, Wash. (Lat 46°44'19", long 122°08'33")											
1972				1973				1973			
Oct. 6	1500	77.6	15	Mar. 12	1345	390	4.0	May 17	1630	242	14.5
Nov. 30	1230	214	4.5	Mar. 22	0955	282	4.5	July 19	1555	61.8	19.5
1973				Apr. 3	1015	178	5.5	July 31	1000	46.9	15.0
Jan. 16	1305	1,070	4.5								
12091060. Flett Creek at Mountain View Memorial Park at Tacoma, Wash. (Lat 47°11'06", long 122°29'17")											
1972				1973							
Dec. 27	0920	27.6	7.0	Feb. 8	1100	0.60	4.5				
12091100. Flett Creek at Tacoma, Wash. (Lat 47°11'23", long 122°31'08")											
1972				1973				1973			
Oct. 17	1115	2.35	9.5	Feb. 8	1350	7.98	5.0	July 3	1140	2.00	14.0
Dec. 21	1045	40.6	6.5	Apr. 11	1110	4.34	12.0	Sept. 6	1530	.37	14.0
Dec. 27	1040	44.1	8.0	May 9	0850	3.47	10.0				
12091180. Leach Creek at holding pond at Fircrest, Wash. (Lat 47°13'29", long 122°30'32")											
1972				1973				1973			
Oct. 16	1130	0.94	9.5	Apr. 12	1125	1.43	11.0	July 3	1510	1.34	21.0
1973				June 13	1330	1.77	13.5	Sept. 7	1120	1.23	13.0
Feb. 9	1305	1.39	6.0								
12091200. Leach Creek near Fircrest, Wash. (Lat 47°13'18", long 122°30'29")											
1972				1973				1973			
Oct. 17	0845	1.47	6.5	Apr. 11	1615	1.78	13.5	July 3	1400	1.59	15.0
Dec. 22	1340	4.00	8.5	May 9	1320	10.3	9.5	Sept. 6	1420	1.00	14.5
1973											
Feb. 9	1000	1.53	6.0								

Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)
12091300. Leach Creek near Steilacoom, Wash. (Lat 47°11'54", long 122°31'17")											
1972				1972				1973			
Oct. 16	1630	6.01	9.5	Dec. 26	1425	58.9	8.0	May 9	1145	11.6	9.5
Nov. 9	0950	17.0	9.0	1973				July 3	1245	4.82	13.0
Dec. 1	1550	7.34	9.5	Feb. 8	1440	6.72	9.5	July 9	1350	5.01	13.5
Dec. 21	1200	58.4	8.5	Apr. 11	1300	5.49	11.0	Aug. 17	1100	5.84	9.0
12091700. Judd Creek near Burton, Wash. (Lat 47°24'40", long 122°28'18")											
1972				1973				1973			
Nov. 17	1015	2.4	6.5	Mar. 20	0750	5.5	6.5	July 14	0745	1.4	12.0
1973				May 16	0915	1.9	11.5	Sept. 20	0800	2.8	12.0
Jan. 24	1025	15	5.0								
12092000. Puyallup River near Electron, Wash. (Lat 46°54'14", long 122°02'02")											
1972				1973				1973			
Nov. 1	1600	288	5.5	Feb. 5	1215	209	1.0	July 3	1015	440	10.0
1973				Feb. 9	1010	190	3.0	Sept. 6	1415	393	9.5
Jan. 9	0830	206	0.0	Mar. 6	0830	191	2.0				
12093500. Puyallup River near Orting, Wash. (Lat 47°02'22", long 122°12'24")											
1972				1973				1973			
Nov. 3	0925	448	6.5	Feb. 5	1420	367	3.0	July 3	1330	610	13.5
1973				Feb. 9	1115	371	3.0	Sept. 4	1400	450	11.0
Jan. 9	1030	308	0.0	May 11	1405	595	10.5				
12093900. Carbon River at Fairfax, Wash. (Lat 47°00'47", long 122°00'42")											
1972				1973				1973			
Nov. 6	1200	338	6.5	Feb. 2	1415	151	3.5	July 12	1125	318	10.0
1973				Mar. 7	0815	142	3.5	Sept. 6	1040	241	8.0
Jan. 8	0945	161	0.0	Apr. 6	0945	166	4.0				
12097000. White River at Greenwater, Wash. (Lat 47°08'48", long 121°38'44")											
1972				1973				1973			
Nov. 7	1205	429	6.0	Mar. 9	0905	387	3.5	July 5	1305	899	9.0
1973				May 7	1045	613	5.0	Sept. 6		515	9.0
Jan. 12	0755	745	0.0								
12097500. Greenwater River at Greenwater, Wash. (Lat 47°09'13", long 121°38'04")											
1972				1973				1973			
Nov. 7	1030	79.1	5.5	Mar. 9	0840	92.8	4.0	July 5	1110	107	10.0
1973				May 8	1235	184	5.5	Sept. 6	1300	32.5	13.5
Jan. 12	1000	170	0.0								
12098500. White River near Buckley, Wash. (Lat 47°09'05", long 121°56'55")											
1972				1973				1973			
Oct. 3	1300	316	11.0	Jan. 24	1015	113	4.0	June 1	1225	1,510	9.5
Nov. 1	1100	485	5.5	Mar. 7	1230	640	4.5	July 2		1,700	12.0
Dec. 18	1330	1,420	3.5	Apr. 4	0845	549	5.5	Aug. 1		870	14.0
1973				May 1	1245	780	7.0	Sept. 5		617	5.0
Jan. 10	1430	909	0.0	May 23	1410	1,810	9.5	Sept. 14		528	11.5
12101500. Puyallup River at Puyallup, Wash. (Lat 47°12'31", long 122°19'33")											
1973				1973				1973			
May 11	1615	2,970	13.0	Aug. 1	0800	2,400	14.5	Sept. 8	0700	860	11.5
July 16		1,490	15.5								
12103400. Green River below Intake Creek near Lester, Wash. (Lat 47°12'44", long 121°25'13")											
1973				1973				1973			
Jan. 10	0845	74.8	0.0	May 9	1030	139	4.0	Sept. 5	1350	11.5	14.5
Mar. 12	1300	80.3	3.5	July 10	1610	35.2	13.5				

Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)
12104000. Friday Creek near Lester, Wash. (Lat 47°13'17", long 121°27'22")											
1972				1973				1973			
Nov. 8	1035	14.7	5.0	Mar. 12	1132	17.6	4.0	July 10	1420	7.51	11.5
1973				May 9	1150	31.0	4.5	Sept. 5	1530	2.43	12.0
Feb. 6	0917	8.81	.5								
12104500. Green River near Lester, Wash. (Lat 47°12'28", long 121°33'07")											
1972				1973				1973			
Nov. 8	1215	174	5.0	Mar. 13	1150	259	4.0	July 10	1155	103	14.0
Nov. 15	0900	106	4.5	May 9	1430	386	6.0	Sept. 5	1125	31.3	14.5
1973											
Jan. 10	1115	222	0.0								
12105710. North Fork Green River near Lemolo, Wash. (Lat 47°18'21", long 121°46'20")											
1972				1973				1973			
Nov. 9	1015	63.4	5.0	Mar. 8	1210	45.3	5.0	July 1	1110	27.6	10.5
1973				May 10	1215	109	6.0	Sept. 5	1100	2.47	11.5
Feb. 1	1130	46.0	3.0								
12105900. Green River below Howard A. Hanson Dam, Wash. (Lat 47°17'02", long 121°47'48")											
1972				1973				1973			
Nov. 9	1130	631	6.0	May 10	0850	1,310	5.5	Sept. 5	1300	219	15.5
1973				July 11	1450	476	12.0				
Mar. 8	0830	556	5.0								
12106700. Green River at purification plant near Palmer, Wash. (Lat 47°18'19", long 121°50'58")											
1972				1973				1973			
Nov. 9	0800	594	6.5	Mar. 7	1215	534	5.0	July 12	1500	393	14.5
1973				May 8	1515	932	6.5	Sept. 5	0900	109	14.0
Jan. 4	1030	1,120	0.0								
12108500. Newaukum Creek near Black Diamond, Wash. (Lat 47°16'33", long 122°03'30")											
1972				1973				1973			
Nov. 14	0920	26	5.0	Jan. 18	1500	99.5	6.0	May 23	0915	27.3	11.5
Dec. 27	1100	227	6.5	Mar. 14	1000	53.4	5.5	July 9	1125	23.7	14.0
12112600. Big Soos Creek above hatchery near Auburn, Wash. (Lat 47°18'45", long 122°09'51")											
1972				1973				1973			
Nov. 14	1530	49.3	7.0	Mar. 13	1330	134	7.5	July 9	1500	44.8	15.5
1973				May 22	1600	48.0	12.0				
Jan. 18	1335	339	8.5								
12113350. Green River at Tukwila, Wash. (Lat 47°27'55", long 122°14'48")											
1973				1973				1973			
Jan. 26	1700	1,740	4.5	May 15	1110	1,600	14.0	Sept. 18	0825	256	14.0
Mar. 20	1130	1,320	7.0	July 13	0810	616	16.5				
12114000. South Fork Cedar River near Lester, Wash. (Lat 47°18'30", long 121°31'00")											
1972				1973				1973			
Oct. 5	0950	4.55	8.0	Jan. 14	1315	17.9	1.0	May 17	1145	132	3.0
Nov. 18	0935	29	2.5	Mar. 27	1350	44.7	2.0	July 12	1400	58.6	7.0
12115000. Cedar River near Cedar Falls, Wash. (Lat 47°22'13", long 121°37'26")											
1972				1973				1973			
Nov. 8	1255	166	6.5	Mar. 16	1140	166	4.0	July 10	1525	91	11.5
1973				May 24	1445	338	6.5	Sept. 6	1450	28	10.0
Jan. 17	1345	412	3.0								
12115500. Rex River near Cedar Falls, Wash. (Lat 47°21'03", long 121°39'43")											
1972				1973				1973			
Nov. 9	0930	90.6	4.5	Mar. 16	1400	66.7	4.0	July 11	1450	27.6	13.0
1973				May 25	1144	103	5.5	Sept. 7	1020	17.1	10.0
Jan. 17	1430	155	2.0								

Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)
12116100. Canyon Creek near Cedar Falls, Wash. (Lat 47°25'11", long 121°45'55")											
1972				1973				1973			
Nov. 8	1525	0.38	15.0	Mar. 15	1600	1.68	4.5	Sept. 5	1620	4.20	17.0
1973				May 18	1650	21.0	5.5	Sept. 6	1150	3.69	17.0
Jan. 24	1610	31.8	6.0	July 16	1710	26.9	16.5				
12116500. Cedar River at Cedar Falls, Wash. (Lat 47°25'02", long 121°47'27")											
1972				1973				1973			
Nov. 7	1540	164	9.0	Mar. 20	1615	78.5	4.0	July 10	1200	57.3	14.5
1973				May 18	1255	225	10.0	Sept. 5	1300	47.2	15.5
Jan. 16	0850	731	1.0								
12117000. Taylor Creek near Selleck, Wash. (Lat 47°23'12", long 121°50'42")											
1972				1973				1973			
Nov. 7	1450	50.9	8.0	Mar. 20	1405	81.5	4.0	Sept. 5	1120	20.6	9.5
1973				May 15	1300	69.2	14.0	Sept. 6	1020	19.1	8.5
Jan. 16	1215	228	5.0	July 10	0805	42.3	8.5				
12118500. Rock Creek near Maple Valley, Wash. (Lat 47°22'48", long 122°00'58")											
1972				1973				1973			
Nov. 14	1335	3.82	6.0	Jan. 23	1430	35.3	8.0	May 22	1315	4.73	10.0
Dec. 27	1320	45.9	8.0	Mar. 14	1130	13.7	7.0	July 11	0845	4.08	11.0
12119000. Cedar River at Renton, Wash. (Lat 47°28'58", long 122°12'08")											
1972				1973				1973			
Nov. 9	1030	407	9.0	Mar. 15	0810	427	6.5	Sept. 18	1405	181	14.0
Dec. 26	0930	2,440	6.0	May 15	1400	320	16.0				
1973				July 6	1530	199	21.0				
Jan. 22	1145	1,120	3.5								
12120000. Mercer Creek near Bellevue, Wash. (Lat 47°36'11", long 122°10'47")											
1972				1973				1973			
Nov. 16	1029	11.9	4.5	Mar. 15	1600	41.5	11.0	July 10	0915	9.46	15.5
Dec. 26	1515	173	8.0	May 18	1150	8.46	15.0	Sept. 14	0900	7.41	14.0
1973											
Jan. 22	1430	23.0	4.0								
12120500. Juanita Creek near Kirkland, Wash. (Lat 47°42'20", long 122°12'56")											
1972				1973				1973			
Nov. 16	1315	4.6	9.0	Mar. 16	0915	8.7	8.0	July 12	1515	3.0	17.0
1973				May 17	0745	5.0	11.0				
Jan. 17	1110	21	5.5								
12121600. Issaquah Creek near mouth, near Issaquah, Wash. (Lat 47°33'09, long 122°02'48")											
1972				1973				1973			
Nov. 15	1305	53.8	6.5	Mar. 21	1340	139	10.0	July 10	1415	42.5	18.5
1973				May 18	1410	52.2	14.5	Sept. 14	1445	24.3	15.0
Jan. 19	1150	241	5.5								
12121700. Tibbetts Creek near Issaquah, Wash. (Lat 47°32'30", long 122°03'47)											
1972				1973				1973			
Nov. 15	1120	1.4	6.5	Mar. 22	1230	6.6	8.5	July 10	1230	0.8	16.0
1973				May 21	1150	1.1	13.0				
Jan. 19	0945	15	5.0								
12124000. Evans Creek above mouth near Redmond, Wash. (Lat 47°40'31", long 122°04'48")											
1972				1973				1973			
Nov. 15	1445	12	7.5	Mar. 16	1430	22	8.5	July 11	1340	7.3	15.0
1973				May 21	1340	8.6	13.5				
Jan. 19	1430	51	5.0								

WATER TEMPERATURES COLLECTED AT PARTIAL-RECORD SITES
WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

Date	Time	Discharge	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)
12125200. Sammamish River near Woodinville, Wash. (Lat 47°42'15", long 122°08'29")											
1972				1973				1973			
Nov. 14	1030	169	8.5	Mar. 21	0945	341	7.0	Sept. 14	1115	68.0	15.5
1973				May 17	0930	146	14.5				
Jan. 17	1315	947	5.5								
12127100. Swamp Creek at Kenmore, Wash. (Lat 47°45'22", long 122°13'57")											
1972				1973				1973			
Nov. 28	1115	18	5.0	Mar. 16	1040	33	7.0	July 12	1105	5.1	14.5
1973				May 16	1410	7.2	19.0				
Jan. 16	1430	189	5.0								
12133000. South Fork Skykomish River near Index, Wash. (Lat 47°48'20", long 121°32'44")											
1973				1973				1973			
May 17	1010	5,530	4.5	July 17	1300	1,130	16.0	Sept. 6	0915	401	15.5
12134500. Skykomish River near Gold Bar, Wash. (Lat 47°50'15", long 121°39'56")											
1972				1973				1973			
Nov. 16	1100	1,500	5.0	Mar. 21	1335	1,630	6.0	July 17	1500	1,950	16.5
1973				May 16	1345	8,590	4.5	Sept. 5	1445	626	18.0
Jan. 16	1300	7,490	4.0								
12135000. Wallace River at Gold Bar, Wash. (Lat 47°51'50", long 121°41'47")											
1972				1973				1973			
Nov. 16	0900	62	5.0	Mar. 21	1545	85	5.0	July 18	0935	36	15.5
1973				May 16	1320	248	4.5	Sept 6	1330	15	14.0
Jan. 16	1530	289	4.5								
12141300. Middle Fork Snoqualmie River near Tanner, Wash. (Lat 47°29'10", long 121°38'48")											
1972				1973							
Dec. 26	1640	8,230	4.5	Mar. 8	1710	475	5.5				
1973				May 16	1520	2,400	8.0				
Jan. 31	1025	490	3.5								
12142000. North Fork Snoqualmie River near Snoqualmie Falls, Wash. (Lat 47°36'54", long 121°42'44")											
1973				1973							
Jan. 15	1155	1,100	3.5	Mar. 14	1640	265	4.0				
12143400. South Fork Snoqualmie River above Alice Creek, near Garcia, Wash. (Lat 47°24'55", long 121°35'10")											
1972				1973				1973			
Nov. 10	1700	151	5.5	Jan. 31	1540	132	1.5	May 31	1315	319	10.0
Dec. 21	1445	2,410	3.0	Mar. 15	1005	162	4.0	July 16	1355	81.7	15.5
1973				May 16	1845	713	6.5	Sept. 13	1005	30.3	11.0
Jan. 19	0830	292	1.5								
12143700. Boxley Creek near Cedar Falls, Wash. (Lat 47°25'58", long 121°45'04")											
1972				1973				1973			
Nov. 8	1700	0.54	7.0	Mar. 15	1410	3.25	6.0	July 11	1720	42.0	8.0
Nov. 9	1240	.70	4.5	May 18	1520	16.7	8.0	Sept. 5	1455	11.1	8.0
1973											
Jan. 24	1350	53.8	6.0								
12144000. South Fork Snoqualmie River at North Bend, Wash. (Lat 47°29'18", long 121°47'03")											
1972				1973				1973			
Nov. 9	1450	323	7.0	Mar. 8	1010	311	5.5	July 19	1550	204	14.5
Dec. 26	1240	5,500	4.5	May 14	1555	956	12.0	Sept. 19	1135	89.1	11.0
1973				July 16	1000	222	13.5				
Jan. 26	1150	463	4.5								
12144500. Snoqualmie River near Snoqualmie, Wash. (Lat 47°32'43", long 121°50'28")											
1973				1973				1973			
Mar. 14	1245	1,610	4.5	May 17	1445	4,500	11.0	July 20	1430	956	14.5

Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)
12145500. Raging River near Fall City, Wash. (Lat 47°32'24", long 121°54'28")											
1972				1973				1973			
Oct. 9	1630	135	5.0	Mar. 13	1750	217	4.0	July 20	1000	18.2	15.5
1973				May 15	1705	56.3	14.5	Sept. 26	1050	26.5	10.5
Jan. 24	1015	145	5.5								
12147500. North Fork Tolt River near Carnation, Wash. (Lat 47°42'45", long 121°47'15")											
1972				1973				1973			
Nov. 14	1505	146	5.5	Mar. 9	1300	217	5.5	May 23	1005	221	7.0
1973				Mar. 13	0905	243	5.5	July 24	1305	93.4	11.0
Jan. 18	1530	390	4.5	May 22	1230	194	8.0	Sept. 7	1505	104	10.5
12147600. South Fork Tolt River near Index, Wash. (Lat 47°42'25", long 121°35'56")											
1972				1973				1973			
Nov. 13	1640	20	5.5	Mar. 12	1150	33	1.0	July 25	1025	8.9	10.5
1973				May 23	1225	42	6.0	Sept. 20	1130	20	10.0
Jan. 18	0930	47	2.0	May 24	1020	91	6.5				
12148000. South Fork Tolt River near Carnation, Wash. (Lat 47°41'22", long 121°42'44")											
1972				1973				1973			
Nov. 14	1150	63	8.0	Mar. 12	1520	79	4.0	July 24	1550	34	11.5
1973				May 22	1545	61	9.0	Sept. 20	1310	68	13.5
Jan. 23	1615	75	4.0								
12148500. Tolt River near Carnation, Wash. (Lat 47°41'45", long 121°49'22")											
1972				1973				1973			
Dec. 1	1200	498	6.0	Mar. 9	1435	344	5.5	July 24	1015	141	10.5
1973				May 21	1610	286	11.0	Sept. 20	1515	172	11.5
Jan. 23	1225	437	6.0								
12150800. Snohomish River near Monroe, Wash. (Lat 47°49'52", long 122°02'50")											
1972				1973				1973			
Nov. 17	1100	3,740	5.5	Mar. 20	1105	5,960	6.0	July 16	1255	3,720	18.0
1973				May 15	1000	19,100	6.0	Sept. 5	1030	1,650	16.5
Jan. 15	1355	33,400	6.0								
12161000. South Fork Stillaguamish River near Granite Falls, Wash. (Lat 48°06'13", long 121°56'37")											
1972				1973				1973			
Oct. 20	1340	154	8.0	Jan. 22	1520	630	3.0	July 24	1210	215	9.0
Dec. 11	1215	283	0.0	May 9	1315	1,400	6.0	Sept. 21	1215	1,740	11.0
12167000. North Fork Stillaguamish River near Arlington, Wash. (Lat 48°15'42", long 122°02'47")											
1972				1973				1973			
Oct. 20	1050	362	6.0	Apr. 4	1045	1,120	6.0	July 20	1045	590	9.0
Dec. 11	1550	610	0.0	May 11	1020	1,540	5.5	Sept. 19	1140	241	13.5
1973											
Jan. 17	1300	4,610	4.5								
12168500. Pilchuck Creek near Bryant, Wash. (Lat 48°15'58", long 122°09'46")											
1972				1973				1973			
Oct. 16	1315	26	6.5	Apr. 4	1310	172	8.0	July 18	1400	15	10.0
Dec. 4	1135	165	1.0	May 10	1330	316	5.5	Sept. 19	1400	4.9	11.5
1973											
Jan. 18	1130	397	3.5								
12175500. Thunder Creek near Newhalem, Wash. (Lat 48°40'22", long 121°04'18")											
1972				1973				1973			
Oct. 4	1100	392	5.5	Feb. 16	1000	113	3.5	June 14	1210	786	6.0
Dec. 13	1315	110	1.5	Apr. 12	1245	203	4.5	Aug. 15	1335	945	9.0
12177500. Stetattle Creek near Newhalem, Wash. (Lat 48°43'20", long 121°08'58")											
1972				1973				1973			
Oct. 4	1500	120	6.0	Feb. 15	1230	34	3.0	June 14	1610	227	6.0
Dec. 13	1540	33	2.5	Apr. 13	0830	185	4.5	Aug. 15	1900	131	18.0

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Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)
12178000. Skagit River at Newhalem, Wash. (Lat 48°40'19", long 121°14'48")											
1972				1973							
Dec. 14	0945	6,070	5.0	Aug. 14	1405	6,000	11.0				
12178100. Newhalem Creek near Newhalem, Wash. (Lat 48°39'22", long 121°14'14")											
1972				1973				1973			
Oct. 11	0900	89	4.0	Feb. 15	1550	42	3.5	June 13	1515	299	6.0
Dec. 12	1330	42	0.5	Apr. 11	1300	109	5.0	Aug. 14	1940	120	11.0
12186000. Sauk River above White Chuck River near Darrington, Wash. (Lat 48°10'08", long 121°28'10")											
1972				1973				1973			
Oct. 2	1400	858	10.0	Feb. 13	1430	308	4.0	June 12	1245	1,490	8.0
Nov. 15	1120	470	5.0	Apr. 10	1450	480	9.5	Aug. 13	1415	582	16.5
Dec. 15	1200	265	0.5								
12188400. Suiattle River above Big Creek near Darrington, Wash. (Lat 48°20'32", long 121°27'08")											
1972				1973				1973			
Oct. 3	0935	1,400	7.0	Feb. 21	1325	584	4.0	June 15	1000	2,080	6.0
Nov. 14	1310	720	5.5	Apr. 17	1300	911	6.0	Aug. 16	1045	1,190	10.5
Dec. 14	1250	507	0.0								
12189500. Sauk River near Sauk, Wash. (Lat 48°25'29", long 121°34'02")											
1972				1973				1973			
Oct. 5	1050	2,600	7.0	Feb. 13	1530	1,600	4.5	June 12	1530	4,970	9.0
Dec. 14	1645	1,340	1.0	Apr. 10	1550	1,900	10.0				
12191800. Sulphur Creek near Concrete, Wash. (Lat 48°40'04", long 121°45'00")											
1972				1973				1973			
Oct. 10	1650	41.5	5.5	Feb. 22	0950	20.8	3.0	Aug. 13	1850	32.6	11.5
Dec. 11	1330	27.0	1.5	June 19	1725	50.1	6.5				
12193500. Baker River at Concrete, Wash. (Lat 48°32'24", long 121°44'31")											
1972				1973							
Oct. 12	0900	3,020	11.5	Apr. 18	1405	3,070	5.5				
Dec. 19	1035	4,060	6.0	Aug. 16	1530	3,130	12.0				
12194000. Skagit River near Concrete, Wash. (Lat 48°31'28", long 121°46'11")											
1972				1973							
Dec. 18	1630	13,900	5.5	Aug. 8	1240	11,100	11.0				
12200500. Skagit River near Mount Vernon, Wash. (Lat 48°26'42", long 122°20'03")											
1972				1973				1973			
Oct. 17	1730	7,450	10.0	Feb. 2	1110	12,300	5.0	Sept. 25	0830	7,820	11.0
Dec. 7	1125	13,900	2.0	May 10	1100	15,500	6.0				
12205000. North Fork Nooksack River below Cascade Creek, near Glacier, Wash. (Lat 48°54'22", long 121°50'35")											
1972				1973				1973			
Oct. 18	1015	267	4.5	Mar. 14	0950	271	3.5	July 10	1100	1,030	9.0
Dec. 5	1000	276	0.0	May 15	1410	1,660	5.5	Sept. 26	1610	374	8.5
1973											
Jan. 31	1040	269	2.0								
12207200. North Fork Nooksack River near Deming, Wash. (Lat 48°52'24", long 122°08'56")											
1972				1973				1973			
Oct. 18	1455	512	8.0	Feb. 1	0815	758	3.5	July 10	1200	1,490	8.0
Dec. 5	1155	649	1.0	Mar. 21	1500	764	5.5	Sept. 26	0915	558	8.5
12209000. South Fork Nooksack River near Wickersham, Wash. (Lat 48°39'52", long 122°07'56")											
1972				1973				1973			
Oct. 16	1505	161	8.0	Mar. 22	1020	381	4.0	July 11	1200	291	11.0
Dec. 5	1540	344	0.0	May 23	1055	1,050	7.0	Sept. 25	1600	242	12.0
1973											
Feb. 1	1410	353	3.5								

Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)
12210500. Nooksack River at Deming, Wash. (Lat 48°48'38", long 122°12'13")											
1972				1973				1973			
Oct. 18	1800	901	9.0	Jan. 31	1310	1,810	3.0	May 16	1000	6,510	5.5
Dec. 6	1000	1,200	0.0	Mar. 22	1345	1,940	4.5	July 11	0930	2,830	9.5
				Apr. 3	1410	1,480	5.0	Sept. 27	0910	1,150	10.0
12213100. Nooksack River at Ferndale, Wash. (Lat 48°50'42", long 122°35'17")											
1972				1973				1973			
Oct. 19	1315	1,060	7.0	Jan. 24	1100	3,080	5.0	July 19	0845	3,170	15.5
				Mar. 21	0745	2,670	5.0	Sept. 28	1220	1,240	12.0
12396000. Calispell Creek near Dalkena, Wash. (Lat 48°14'40", long 117°20'26")											
1972				1973				1973			
Nov. 2	1500	13.5	4.5	Jan. 5	1620	19.4	0.0	June 18	1410	37.8	12.0
1973				Mar. 1	1610	51.2	1.0	Aug. 14	1400	4.66	18.0
Jan. 2	1517	20.2	1.0	Apr. 30	1645	96.4	8.5				
12397100. Outlet Creek near Metaline Falls, Wash. (Lat 48°50'42", long 117°17'12")											
1972				1973				1973			
Nov. 2	1005	260	8.5	Jan. 3	1445	26.9	2.5	June 20	0925	15.0	13.0
				May 2	1520	2.14	14.0	Aug. 16	1620	18.7	14.5
12398600. Pend Oreille River at international boundary (Lat 48°59'56", long 117°21'09")											
1972				1973				1973			
Oct. 12	1315	20,500	13.0	May 1	1300	31,000	10.5	Aug. 15	1750	13,800	22.0
1973				June 19	1200	31,600	15.0	Aug. 27	1815	15,400	20.0
Jan. 12	1430	9,250	1.0								
12399600. Deep Creek near Northport, Wash. (Lat 48°55'47", long 117°44'59")											
1972				1973				1973			
Oct. 30	1640	22.1	4.5	May 3	1630	159	9.5	July 26	--	14.8	16.0
1973				June 21	1940	56.0	20.0	Aug. 17	0855	6.04	12.0
Jan. 5	1100	22.4	0.0	July 24	1930	16.4	20.0	Aug. 28	1715	5.16	6.0
Feb. 27	1715	52.2	3.5								
12401500 Kettle River near Ferry, Wash. (Lat 48°58'53", long 118°45'55")											
1972				1973				1973			
Oct. 11	0940	355	5.5	Jan. 9	1130	108	0.0	June 14	1510	3,080	11.5
Nov. 9	1525	290	6.0	Jan. 18	1345	154	0.5	Aug. 2	1510	165	23.5
Dec. 20	0840	144	0.0	May 9	1600	2,880	7.5	Sept. 6	1420	64	17.0
				May 29	1450	4,430	11.0				
12404500. Kettle River near Laurier, Wash. (Lat 48°59'04", long 118°12'55")											
1972				1973				1973			
Oct. 11	1440	627	9.0	Jan. 10	1345	322	0.0	Aug. 2	1150	393	22.5
Nov. 9	1110	607	6.0	May 9	1150	6,200	7.5	Sept. 6	1045	152	18.0
Dec. 20	1125	339	0.0	May 29	1735	8,210	8.0				
12407700. Chewelah Creek at Chewelah, Wash. (Lat 48°17'01", long 117°42'50")											
1972				1973				1973			
Oct. 3	1340	12.6	10.5	Jan. 30	1545	14.5	3.0	June 21	1015	12.1	13.5
Nov. 7	1145	16.6	6.5	Mar. 20	1150	27.0	5.0	Aug. 1	1135	2.18	15.0
Dec. 19	1435	34.8	1.5	May 10	1515	30.9	10.0	Sept. 5	1400	3.81	17.5
				June 15	1445	12.9	12.5				
12408300. Little Pend Oreille River near Colville, Wash. (Lat 48°27'58", long 117°44'53")											
1972				1973				1973			
Oct. 6	1415	16.3	8.0	Feb. 2	1325	22.4	3.5	June 13	1515	32.8	12.5
Nov. 10	1010	24.5	5.0	Feb. 7	1500	26.6	0.0	Aug. 1	1340	10.3	21.0
Dec. 21	1200	29.4	1.0	May 10	1355	105	9.5	Sept. 7	1245	10.9	17.0

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Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)
12409000. Colville River at Kettle Falls, Wash. (Lat 48°35'40", long 118°03'41")											
1972				1973				1973			
Oct. 6	0940	114	8.5	Feb. 2	1010	179	1.0	July 27	1200	18.8	22.5
Nov. 7	1525	154	6.0	May 10	1040	373	10.0	Aug. 3	0940	16.2	23.0
Dec. 2	0900	210	0.5	June 13	1150	124	16.5	Sept. 7	0930	26.4	19.0
				June 15	0920	123	15.5				
12419500. Spokane River above Liberty Bridge, near Otis Orchards (Lat 47°40'56", long 117°05'05")											
1972				1973				1973			
Oct. 31	1200	1,540	8.5	Feb. 8	0805	5,130	0.5	July 20	1150	580	22.0
Dec. 13	1245	3,730	1.5	Apr. 6	0905	4,420	5.0	Aug. 16	1010	337	22.0
				May 29	0815	5,240	13.5	Sept. 19	0940	59.2	15.5
12424000. Hangman Creek at Spokane, Wash. (Lat 47°39'10", long 117°26'55")											
1972				1973				1973			
Oct. 27	1030	18.0	5.0	Apr. 3	1130	91.7	9.0	Aug. 8	0755	1.88	15.5
Dec. 12	1230	9.31	0.0	May 29	1400	22.3	20.5	Aug. 29	1450	1.86	24.0
1973				July 20	1250	2.54	22.0	Sept. 28	1230	1.82	15.5
Feb. 8	1645	50.8	0.5								
12431000. Little Spokane River at Dartford, Wash. (Lat 47°47'05", long 117°24'12")											
1972				1973				1973			
Oct. 25	0950	145	4.5	Apr. 3	1415	270	9.5	Aug. 16	1200	83.8	15.5
Dec. 12	1425	139	3.5	Apr. 9	1540	237	11.0	Sept. 18	0910	107	13.0
1973				Apr. 10	1120	230	12.5	Sept. 25	1050	135	11.5
Feb. 7	1310	182	3.5	May 29	1200	166	15.5				
12433100. Chamokane Creek near Springdale, Wash. (Lat 47°59'41", long 117°43'31")											
1973				1973				1973			
June 1	1055	3.54	14.5	June 21	1310	2.23	20.5	July 31	1440	0.49	26.0
June 11	1325	4.05	18.5	July 24	1025	.69	10.5	Aug. 31	1345	1.11	15.0
12433200. Chamokane Creek below Falls, near Long Lake, Wash. (Lat 47°51'42", long 117°51'28")											
1972				1973				1973			
Oct. 2	1520	26.3	11.0	Jan. 29	1105	28.1	3.0	June 11	1540	23.1	17.5
Nov. 6	1100	26.9	6.0	Feb. 7	1200	26.2	2.8	June 21	1500	21.8	18.0
Nov. 14	1045	26.4	6.5	Mar. 19	1010	77.8	5.0	July 24	1230	21.9	8.5
Dec. 11	1145	27.2	0	May 11	1530	26.4	17.0	July 31	1640	20.4	21.5
				June 1	0855	24.8	9.5	Sept. 4	1540	18.9	12.5
12436500. Columbia River at Grand Coulee Dam, Wash. (Lat 47°57'56", long 118°58'54")											
1972				1973				1973			
Nov. 14	1330	86,200	10.5	Jan. 11	1305	88,000	3.0	Apr. 27	1025	77,100	10.0
12439300. Tonasket Creek at Oroville, Wash. (Lat 48°56'35", long 119°24'45")											
1973				1973				1973			
Jan. 2	1400	1.17	0.5	May 31	1420	2.69	16.5	Aug. 23	1050	0.44	18.0
Feb. 28	1025	31.6	2.5	June 11	1445	2.14	14.0	Sept. 6	1400	.04	20.5
Apr. 23	1420	5.66	13.5	July 31	1345	.77	25.0				
12439500. Okanogan River at Oroville, Wash. (Lat 48°55'51", long 119°25'09")											
1972				1973				1973			
Oct. 18	1330	542	11.0	Jan. 26	1235	293	0.5	May 31	1540	293	16.0
Oct. 24	0955	476	10.0	Mar. 28	1410	509	6.5	June 11	1310	273	18.0
Dec. 19	1345	513	1.5	Apr. 23	1120	182	14.0	July 31	1235	200	25.0
				May 14	1230	335	20.0				
12442500. Similkameen River near Nighthawk, Wash. (Lat 48°59'05", long 119°37'02")											
1972				1973				1973			
Oct. 13	1120	753	7.0	Jan. 25	1520	545	0.5	May 15	1045	4,520	13.5
Nov. 8	1010	714	3.0	Feb. 27	1200	534	4.5	June 12	0855	4,210	11.5
Dec. 19	0830	523	0.0	Mar. 2	1255	453	5.5	Aug. 1	0925	538	21.5
1973				Mar. 29	1205	459	11.0	Sept. 6	1055	266	18.5
Jan. 3	0835	266	1.0	Apr. 24	0835	1,040	14.0				

Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)
12444490, Bonaparte Creek near Wauconda, Wash. (Lat 48°39'26", long 119°12'02")											
1973				1973				1973			
Jan. 3	1245	3.4	0.0	Apr. 24	1240	1.9	9.5	June 27	0745	1.0	12.0
Jan. 28	1420	21	3.0	June 12	1210	1.0	12.0				
12445000, Okanogan River near Tonasket, Wash. (Lat 48°37'57", long 119°27'38")											
1972				1973				1973			
Nov. 27	1105	1,080	3.5	Apr. 27	0830	1,120	13.0	June 26	1115	3,530	16.5
1973				May 3	0930	1,600	13.5	Sept. 6	0730	398	19.5
Jan. 4	0950	382	0.0	June 13	0635	4,120	13.0				
12447200, Okanogan River at Malott, Wash. (Lat 48°16'53", long 119°42'12")											
1972				1973				1973			
Dec. 18	1510	1,100	0.0	May 3	1215	1,540	15.0	Aug. 3	0815	644	26.5
				June 13	1040	4,290	15.0	Sept. 4	1220	372	19.0
12449600, Beaver Creek below South Fork, near Twisp, Wash. (Lat 48°26'00", long 120°01"26")											
1972				1973				1973			
Nov. 9	1405	11.5	2.5	Jan. 8	1400	9.88	0.0	June 20	1450	14.0	10.0
				Apr. 25	1530	15.7	7.0	Aug. 14	1545	4.01	15.5
12449950, Methow River near Pateros, Wash. (Lat 48°04'39", long 119°59'02")											
1972				1973				1973			
Nov. 6	1410	548	5.0	Jan. 9	1555	302	0.0	Aug. 10	1000	363	18.5
Dec. 18	1305	487	0.0	Mar. 12	---	419	6.5	Sept. 6	1320	246	17.0
				June 19	1500	1,860	9.0				
12451000, Stehekin River at Stehekin, Wash. (Lat 48°19'47", long 120°41'26")											
1972				1973				1973			
Nov. 7	0910	357	5.0	Mar. 13	1100	315	4.0	June 19	0930	1,600	8.0
1973				May 3	1015	1,500	6.0	Aug. 9	1010	1,440	10.5
Jan. 3	0940	479	1.0								
12452800, Entiat River near Ardenvoir, Wash. (Lat 47°49'07", long 120°25'19")											
1972				1973				1973			
Nov. 7	1325	105	6.0	May 3	1515	347	8.0	June 28	1100	684	11.5
1973				June 18	1350	533	10.0	Aug. 22	1130	107	12.0
Jan. 4	0915	65.0	1.0								
12454000, White River near Plain, Wash. (Lat 47°52'27", long 120°52'03")											
1972				1973				1973			
Nov. 7	1110	231	3.5	Mar. 14	1020	216	2.5	Aug. 23	1250	248	10.5
1973				Apr. 25	1135	591	4.5	Sept. 18	1225	156	8.5
Jan. 10	1320	281	0.0	June 26	1145	1,950	7.5				
12457000, Wenatchee River at Plain, Wash. (Lat 47°45'47", long 120°39'54")											
1972				1973				1973			
Nov. 7	1700	815	6.0	Jan. 10	1715	767	0.0	June 26	1815	4,530	12.0
				Apr. 26	1100	1,950	7.0	Sept. 18	1850	405	13.0
12459000, Wenatchee River at Peshastin, Wash. (Lat 47°35'00", long 120°36'46")											
1972				1973				1973			
Nov. 8	1700	1,070	6.0	Jan. 12	1105	1,210	0.0	June 27	1645	5,940	14.5
				Apr. 27	1230	2,960	8.0	Sept. 19	1600	490	12.5
12462500, Wenatchee River at Monitor, Wash. (Lat 47°29'58", long 120°25'24")											
1972				1973				1973			
Nov. 8	1300	1,170	6.0	Apr. 27	1100	2,930	9.5	Aug. 24	1530	459	19.5
1973				June 27	0750	6,150	12.5	Sept. 19	1830	439	13.0
Jan. 12	1600	1,420	0.0								

WATER TEMPERATURES COLLECTED AT PARTIAL-RECORD SITES
WATER YEAR OCTOBER 1972 TO SEPTEMBER 1973

Date	Time	Discharge (cfs	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)
12464780. Crab Creek above Sylvan Lake, near Lamona, Wash. (Lat 47°18'33", long 118°29'55")											
1972				1973				1973			
Dec. 5	1000	11.5	0.0	Jan. 30	1430	52.8	3.5	May 10	1530	10.7	14.0
1973				May 7	1430	10.0	16.5	July 2	1845	.20	20.5
Jan. 29	1355	46.2	2.0								
12464800. Coal Creek at Mohler, Wash. (Lat 47°24'25", long 118°19'04")											
1972				1973				1973			
Oct. 30	1520	0.56	2.0	Jan. 15	1605	1.41	0.0	Jan. 9	1558	0.49	25.5
Dec. 29	0310	.61	1.0	May 16	1130	.60	19.5				
12464810. Crab Creek below Sylvan Lake near Odessa, Wash. (Lat 47°19'18", long 118°36'25")											
1973				1973				1973			
Jan. 12	1240	18.1	1.0	Jan. 17	1145	1,370	0.5	Mar. 16	1235	44.4	7.0
Jan. 16	1130	741	.5	Jan. 29	1624	83.8	.5	May 7	1830	9.45	15.5
12465000. Crab Creek at Irby, Wash. (Lat 47°21'38", long 118°50'56")											
1973				1973				1973			
Jan. 16	1630	760	0.1	May 10	1300	13.1	15.0	July 2	1345	3.83	21.5
Jan. 30	1200	73.3	.5	July 2	1245	3.83	20.5	Aug. 30	1316	.86	19.5
Mar. 16	1000	41.9	6.5								
12465500. Wilson Creek at Wilson Creek, Wash. (Lat 47°25'50", long 119°06'10")											
1972				1973				1973			
Dec. 22	1330	242	1.0	Jan. 17	1615	526	0.5	Mar. 16	0745	10	5.5
12467000. Crab Creek near Moses Lake, Wash. (Lat 47°11'22", long 119°15'53")											
1972				1973				1973			
Nov. 29	1025	47.5	4.5	Mar. 15	0900	53.3	5.0	June 26	1255	93.0	21.0
1973				May 17	0920	66.2	15.5	Aug. 9	0945	114	17.5
Jan. 11	1500	26.7	0.0								
12470500. Rocky Ford Creek near Ephrata, Wash. (Lat 47°18'36", long 119°26'39")											
1972				1973				1973			
Oct. 10	---	76.5	11.5	Jan. 19	---	57.6	10.0	Aug. 20	---	83.6	15.0
				June 25	---	73.3	16.0				
12472600. Crab Creek near Beverly, Wash. (Lat 46°49'48", long 119,49'48")											
1972				1973				1973			
Oct. 30	1305	297	6.0	Apr. 5	1200	158	13.5	July 30	1200	162	22.0
Dec. 15	1245	149	0.0	May 30	1240	197	21.0	Sept. 20	1640	266	15.5
12472800. Columbia River below Priest Rapids Dam, Wash. (Lat 46°37'44", long 119°51'49")											
1972				1973				1973			
Oct. 30	1630	86,100	13.0	Feb. 8	1000	121,000	2.0	Sept. 20	1320	93,400	17.0
Nov. 9	1120	94,700	10.5	June 19	1155	93,800	17.0				
12479500. Yakima River at Cle Elum, Wash. (Lat 47°11'33", long 120°56'48")											
1972				1973				1973			
Nov. 1	1010	920	5.5	Feb. 20	1630	357	4.4	July 31	1010	3,400	17.0
Dec. 28	1215	2,800	3.0	Apr. 18	0815	1,770	5.6				
12480000. Teanaway River below Forks, near Cle Elum, Wash. (Lat 47°14'48", long 120°51'36")											
1972				1973				1973			
Nov. 1	--	35.5	3.0	Feb. 20	--	114	1.0	June 12	--	176	12.0
Dec. 28	--	756	2.0	Apr. 18	--	398	5.5				

Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)
12483800. Naneum Creek near Ellensburg, Wash. (Lat 47°07'37", long 120°28'47")											
1972				1973				1973			
Oct. 31	0940	21.1	0.0	Feb. 21	1045	17.5	0.0	June 11	1315	46.4	11.1
Dec. 27	1300	34.3	1.0	Apr. 16	1420	60.1	14.4	July 30	1705	14.5	19.5
				May 15	1240	79.8	10.0				
12484500. Yakima River at Umtanum, Wash. (Lat 46°51'46", long 120°28'44")											
1972				1973				1973			
Nov. 1	1320	1,070	18.5	Feb. 21	1510	723	5.5	Sept. 28	0850	929	13.0
				June 14	1140	3,230	12.0				
12488500. American River near Nile, Wash. (Lat 46°58'39", long 121°10'05")											
1972				1973				1973			
Nov. 3	0850	65.3	4.0	Feb. 23	1025	75.6	1.1	Aug. 10	0850	50.0	11.5
1973				Apr. 20	1350	204	5.0	Sept. 27	1210	58.7	7.5
Jan. 4	1030	103	0.0	June 6	1035	440	7.2				
12500450. Yakima River above Ahtanum Creek, at Union Gap, Wash. (Lat 46°32'04", long 120°27'58")											
1972				1973				1973			
Nov. 3	1800	2,020	9.5	Apr. 19	1055	2,930	8.5	Aug. 1	1055	3,040	20.0
1973				June 5	1420	2,940	17.0	Sept. 25	1325	1,820	15.5
Feb. 22	1220	1,370	5.5								
12500500. North Fork Ahtanum Creek near Tampico, Wash. (Lat 46°33'40", long 120°55'10")											
1972				1973				1973			
Nov. 8	1140	25.1	2.0	Apr. 24	1145	66.4	6.7	Aug. 2	0915	77.9	14.5
1973				June 5	1155	74.3	12.2	Sept. 26	1325	17.6	9.5
Feb. 27	1325	30.7	3.5								
12501000. South Fork Ahtanum Creek at Conrad Ranch, near Tampico, Wash. (Lat 46°30'33", long 120°54'36")											
1972				1973				1973			
Nov. 8	1320	9.47	4.0	Feb. 27	1445	11.9	3.5	Aug. 2	1035	6.68	14.5
1973				Apr. 24	1330	14.2	6.7	Sept. 26	1445	5.95	10.0
Jan. 5	1100	10.9	0.0	June 5	1325	18.0	13.9				
12502500. Ahtanum Creek at Union Gap, Wash. (Lat 46°32'08", long 120°28'20")											
1972				1973							
Nov. 2	1640	45.4	9.0	Feb. 23	1315	73.0	6.5	Aug. 2	1415	10.5	22.0
1973				Apr. 24	1600	28.7	15.6	Sept. 26	1750	20.0	16.0
Jan. 4	1530	58.8	2.0	June 5	1845	37.0	18.3				
12508990. Yakima River at Mabton, Wash. (Lat 46°13'53", long 119°59'54")											
1972				1973				1973			
Oct. 20	1010	3,170	--	Feb. 8	1250	2,730	3.0	July 3	1255	935	21.0
Dec. 29	1205	7,680	3.0	May 29	1235	1,440	24.0	Aug. 31	1155	1,080	17.0
12513500. Esquatzel Coulee at Eltopia, Wash. (Lat 46°27'45", long 119°00'40")											
1972				1973				1973			
Nov. 30	1550	16.9	7.0	Mar. 30	---	21.3	12.8	July 27	1525	30.3	27.8
Dec. 21	---	23.3	10.0								
13334700. Asotin Creek below Kearney Gulch, near Asotin, Wash. (Lat 46°19'29", long 117°09'03")											
1972				1973				1973			
Oct. 18	1735	43.4	12.0	Jan. 30	1400	56.2	4.0	Aug. 14	1245	33.2	22.0
Dec. 5	1015	25.0	0.0	Apr. 25	1230	63.7	14.5				
Dec. 27	1000	80.8	6.0								
13343800. Meadow Creek near Central Ferry, Wash. (Lat 46°35'51", long 117°46'54")											
1972				1973				1973			
Oct. 25	1145	2.05	9.0	Jan. 24	1300	3.69	6.1	Aug. 1	1215	1.31	25.6
Dec. 11	1600	.93	2.0	Apr. 11	1440	3.42	20.0	Sept. 27	0850	1.14	13.5
				June 5	1440	1.32	23.3				

Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)
13344500. Tucannon River near Starbuck, Wash. (Lat 46°30'17", long 118°03'55")											
1972				1973				1973			
Oct. 24	1615	98.0	11.1	Feb. 14	1010	133	3.9	Aug. 1	1530	46.7	28.3
Dec. 12	1415	90.0	.5	Apr. 12	1050	135	15.6	Sept. 26	1250	83.3	18.0
13345300. Palouse River at Palouse, Wash. (Lat 46°54'36", long 117°04'12")											
1973				1973				1973			
Apr. 25	---	134	12.0	June 21	---	30.8	25.0	Aug. 15	1500	1.49	24.5
13348000. South Fork Palouse River at Pullman, Wash. (Lat 46°43'57", long 117°10'48")											
1972				1973				1973			
Dec. 6	0850	6.27	0.0	Jan. 31	---	20.6	1.0	June 19	1655	3.92	23.5
Dec. 26	---	39.6	4.0	Apr. 24	1020	9.04	15.5	Aug. 15	1030	3.92	17.0
13348500. Missouri Flat Creek at Pullman, Wash. (Lat 46°43'59", long 117°10"47")											
1972				1973				1973			
Dec. 6	0820	0.38	0.0	Jan. 31	1100	3.27	1.5	June 19	1710	0.37	22.5
Dec. 26	1510	5.63	4.0	Apr. 24	1600	.70	15.5	Aug. 15	1000	.70	17.0
13349400. Pine Creek at Pine City, Wash. (Lat 47°12'24", long 117°30'14")											
1972				1973				1973			
Oct. 17	1125	3.81	6.5	Feb. 1	1525	26.3	1.0	June 18	1600	4.05	17.0
Dec. 7	1025	4.61	0.0	Apr. 23	1215	10.2	12.5	Aug. 13	1140	.85	14.0
13351000. Palouse River at Hooper, Wash. (Lat 46°45'31", long 118°08'52")											
1972				1973				1973			
Oct. 25	1525	75.1	9.5	Apr. 11	1115	312	14.4	Sept. 27	1455	24.1	17.0
				July 23	1735	2.14	25.0				
13353000. Snake River below Ice Harbor Dam, Wash. (Lat 46°14'53", long 118°52'43")											
1973				1973				1973			
May 14	1150	42,900	14.4	May 17	1210	67,100	23.0	Aug. 14	1220	26,900	23.0
14015000. Mill Creek at Walla Walla, Wash. (Lat 46°04'35", long 118°16'21")											
1973				1973							
Feb. 15	1335	75.9	6.1	Sept. 24	1300	1.82	15.5				
14017000. Touchet River at Bolles, Wash. (Lat 46°16'28", long 118°13'13")											
1972				1973				1973			
Dec. 13	1035	60.6	0.5	Feb. 14	1550	163	3.9	Aug. 2	1710	21.6	29.4
1973				June 7	1105	65.1	19.4	Sept. 26	1050	67.8	12.5
Jan. 5	1110	159	0.0								
14018500. Walla Walla near Touchet, Wash. (Lat 46°01'40", long 118°43'43")											
1972				1973				1973			
Oct. 26	1445	62.4	9.5	Feb. 16	1115	606	5.6	Aug. 2	1115	2.30	23.3
Dec. 19	0950	777	.5	June 8	1655	21.9	22.8	Sept. 25	1300	60.6	16.0
14107000. Klickitat River above West Fork, near Glenwood, Wash. (Lat 46°01'40", long 121°14'38")											
1972				1973				1973			
Nov. 13	1240	133	3.5	Feb. 1	1145	167	0.6	June 28	1645	246	15.6
1973				May 1	1145	370	5.6	Aug. 25	1100	79.0	9.4
Jan. 8	1430	116	0.0								
14112500. Little Klickitat River near Wahkiacus, Wash. (Lat 45°50'34", long 121°03'27")											
1972				1973				1973			
Nov. 16	1340	47.6	6.5	Mar. 5	1530	146	6.7	June 29	0905	15.2	16.6
1973				May 2	1040	48.0	11.7	Aug. 24	1615	11.0	172
Jan. 11	1245	93.0	0.0								

Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)
14121300. White Salmon River below Cascades Creek, near Trout Lake, Wash. (Lat 46°06'06", long 121°36'14")											
1972				1973				1973			
Nov. 15	1005	112	3.5	Mar. 30	1355	74	2.2	June 27	1540	162	10.6
1973				May 1	1530	111	5.6	Aug. 23	1055	86.4	5.6
Jan. 3	1145	153	1.0								
14123500. White Salmon River near Underwood, Wash. (Lat 45°45'08", long 121°31'33")											
1972				1973							
Nov. 14	1740	705	7.0	Aug. 24	0945	490	9.4				
14125500. Little White Salmon River near Cook, Wash. (Lat 45°43'25", long 121°37'58")											
1972				1973				1973			
Nov 14	1410	210	6.7	Jan. 10	1720	885	0.6	June 28	1025	241	7.8
				May 3	1530	319	7.8	Aug. 22	1730	122	8.9
14143500. Washougal River near Washougal, Wash. (Lat 45°37'23", long 122°17'35")											
1972				1973				1973			
Oct. 19	1040	80	9.0	Feb. 13	1030	339	4.0	June 19	1010	431	11.5
				Apr. 10	1010	338	10.0	Aug. 14	0950	70	18.0
14212000. Salmon Creek near Battleground, Wash. (Lat 45°46'26", long 122°26'40")											
1972				1973				1973			
Oct. 19	1450	3.2	9.5	Jan. 31	1500	43	6.0	June 12	0940	7.2	12.0
Dec. 13	1020	19	0.0	Apr. 10	1425	22	13.5	Aug. 14	1410	4.1	18.0
14215000. Rush Creek above falls, near Cougar, Wash. (Lat 46°03'12", long 121°54'40")											
1972				1973				1973			
Oct. 1	1100	126	4.5	Feb. 25	1105	152	4.0	June 20	1105	137	7.0
Dec. 19	0945	488	2.0	Apr. 11	1210	123	5.5	Aug. 15	1000	108	5.5
14216500. Muddy River below Clear Creek near Cougar, Wash. (Lat 46°06'50", long 122°00'24")											
1972				1973				1973			
Dec. 19	1530	4,740	4.0	Feb. 23	1450	358	5.5	June 20	1450	342	14.0
				Apr. 11	1500	530	9.5	Aug. 15	1430	152	15.0
14219800. Speelyai Creek near Cougar, Wash. (Lat 46°00'28", long 122°20'46")											
1972				1972				1973			
Oct. 20	1050	6.91	9.5	Dec. 20	1030	668	6.5	Apr. 11	1730	41.5	9.5
Dec. 11	1535	39.0	.5	1973				June 11	1640	16.3	14.5
				Jan. 31	1045	73.8	4.5	Aug. 15	1705	5.33	15.5
14220500. Lewis River at Ariel, Wash. (Lat 45°57'07", long 122°33"46")											
1972				1973				1973			
Oct. 18	1020	6,060	14.0	Feb. 26	1150	6,280	5.0	June 21	1120	2,980	9.5
Dec. 27	1330	11,700	6.5	Apr. 12	1010	857	8.5	Aug. 7	1245	803	18.5
14222500. East Fork Lewis River near Heisson, Wash. (Lat 45°50'13", long 122°27'54")											
1973				1973				1973			
Jan. 30	1610	574	4.5	Apr. 10	1725	340	10.5	Aug. 14	1710	65	19.0
Feb. 13	1650	297	4.0	June 19	1710	377	13.5				
14223500. Kalama River below Italian Creek near Kalama, Wash. (Lat 46°02'42", long 122°48'51")											
1972				1973				1973			
Oct. 24	1710	246	9.0	Feb. 12	1310	762	7.0	July 18	1240	313	17.0
Dec. 11	1225	523	0.0	Feb. 21	1650	671	6.0	Aug. 13	1715	252	17.0
				Apr. 16	1545	1,130	8.5				
14225500. Lake Creek near Packwood, Wash. (Lat 46°35'47", long 121°34'08")											
1972				1973				1973			
Nov. 22	1535	5.16	5.5	Mar. 30	1728	5.15	3.5	Aug. 13	1600	4.91	20.0
1973				June 8	1255	5.19	9.0	Aug. 14	1225	5.01	20.5
Jan. 31	1440	5.79	3.0								

Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)	Date	Time	Discharge (cfs)	Temperature (°C)
14226000. Lake Creek, at mouth, near Packwood, Wash. (Lat 46°37'48", long 121°38'12")											
1972				1973				1973			
Nov. 27	1110	35.6	4.5	Jan. 30	1330	34.4	4.0	June 8	1755	17.3	9.5
				Apr. 5	1510	19.7	5.0	Aug. 14	0735	12.0	12.0
14226500. Cowlitz River at Packwood, Wash. (Lat 46°36'47", long 121°40'41")											
1972				1973				1973			
Nov. 21	1400	437	4.5	Jan. 30	1200	739	3.5	June 8	1510	2,760	8.5
1973				Feb. 7	1200	534	2.0	Aug. 13	1115	748	18.5
Jan. 2	1415	1,180	3.5	Apr. 5	1125	616	5.5				
14232500. Cispus River near Randle, Wash. (Lat 46°26'50", long 121°51'46")											
1972				1973				1973			
Nov. 27	1430	1,280	4.0	Feb. 9	1410	728	4.0	June 7	1637	1,220	10.0
1973				Apr. 4	1345	636	8.5	Aug. 14	1455	433	16.0
Feb. 2	1115	933	3.5								
14242500. Toutle River near Silver Lake, Wash. (Lat 46°20'11", long 122°43'27")											
1972				1973				1973			
Nov. 7	1500	2,000	8.5	Feb. 20	1515	1,100	5.0	June 18	1355	1,430	12.0
Dec. 15	1050	896	1.5	Apr. 16	1310	1,820	9.0	Aug. 13	1405	452	19.5
14245000. Coweman River near Kelso, Wash. (Lat 46°07'42", long 122°50'14")											
1972				1973				1973			
Nov. 7	1200	364	9.5	Feb. 21	1450	180	4.5	June 25	1045	242	14.5
Dec. 14	1130	157	0.0	May 18	1145	120	16.0	Aug. 30	1435	43	15.0
14248200. Jim Crow Creek near Grays River, Wash. (Lat 46°16'37", long 123°33'37")											
1972				1973				1973			
Oct. 26	0940	3.46	7.0	Feb. 15	1205	11.7	6.5	June 25	1520	33.2	13.0
Dec. 20	1500	137	9.0	Apr. 16	1720	17.9	10.5	Aug. 21	0830	.60	12.0
Dec. 28	1540	103	8.5								
14249000. Grays River above South Fork, near Grays River, Wash. (Lat 46°23'36", long 123°28'39")											
1972				1973				1973			
Oct. 26	1205	43.4	8.0	Feb. 15	1455	123	6.0	June 27	1335	164	15.0
Dec. 28	1100	1,310	6.5	Apr. 17	0700	261	6.0	Aug. 21	1010	26.7	11.0

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☆ U. S. GOVERNMENT PRINTING OFFICE: 1974—796-152

U. S. DEPARTMENT OF THE INTERIOR
Geological Survey
Room 300, 1305 Tacoma Avenue, S.
Tacoma, Washington 98402

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UNIVERSITY OF ILLINOIS-URBANA
551.483UN32WWA C001
WATER RESOURCES DATA FOR WASHINGTON$TACO
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